

FIG. 1

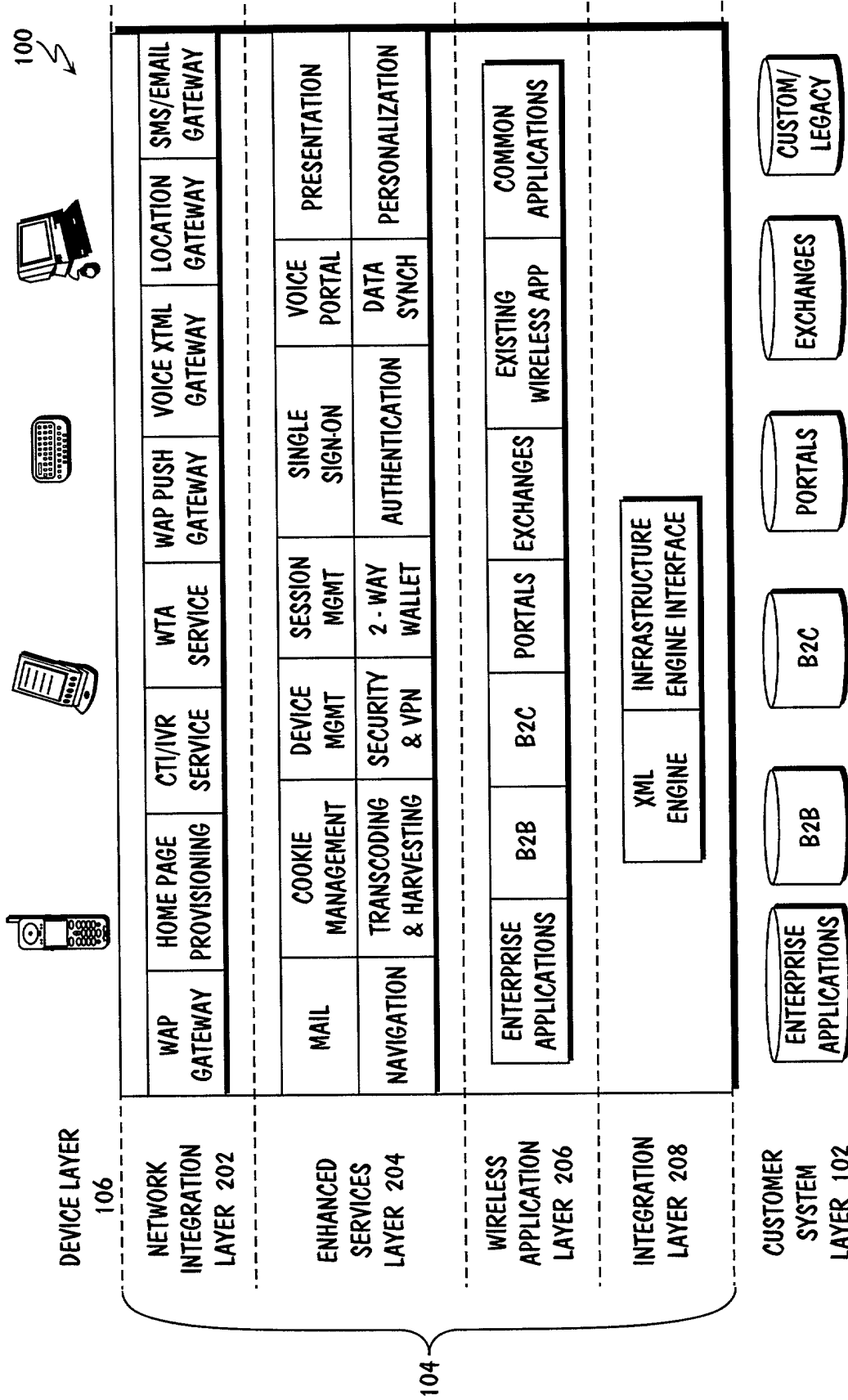


FIG. 2

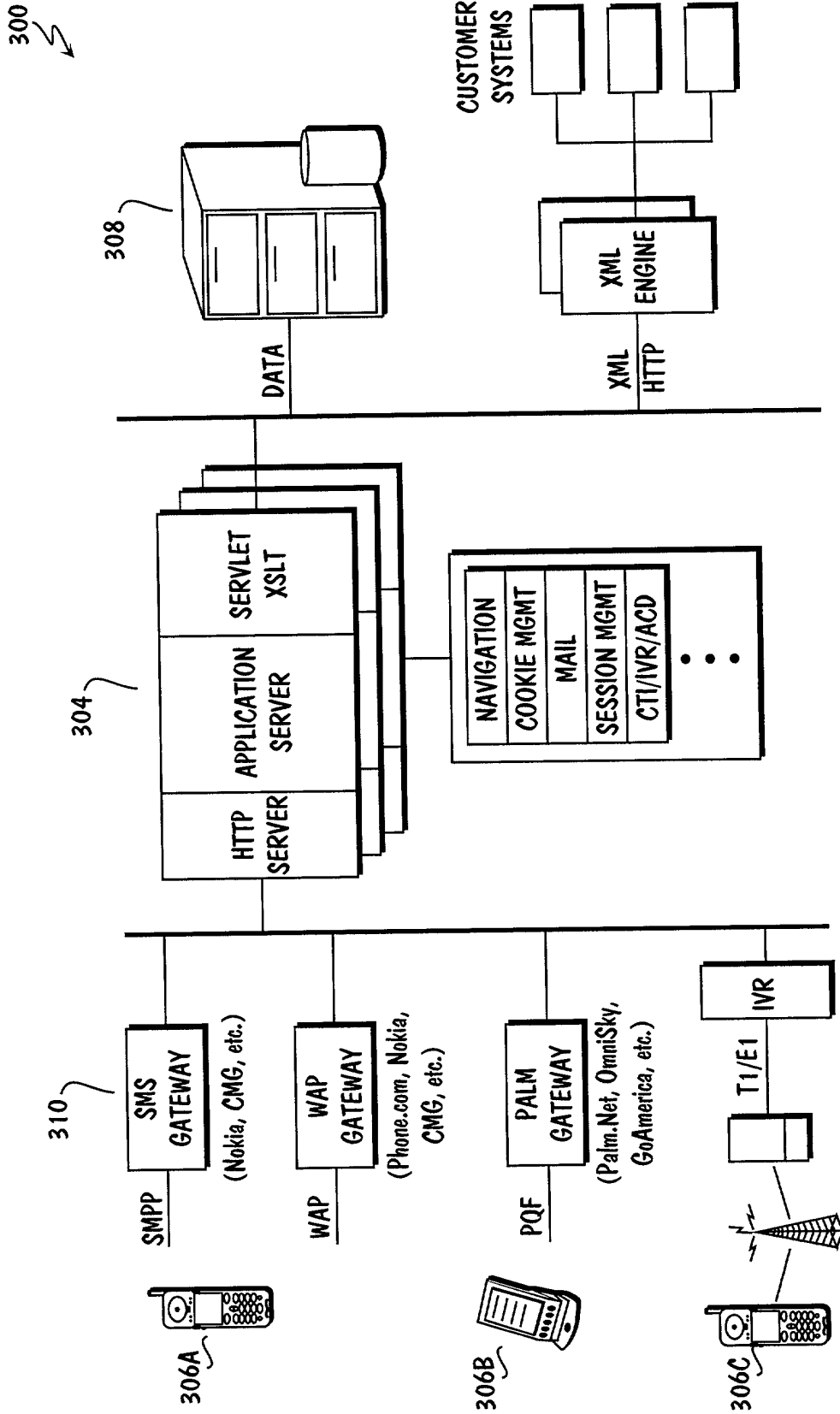


FIG. 3

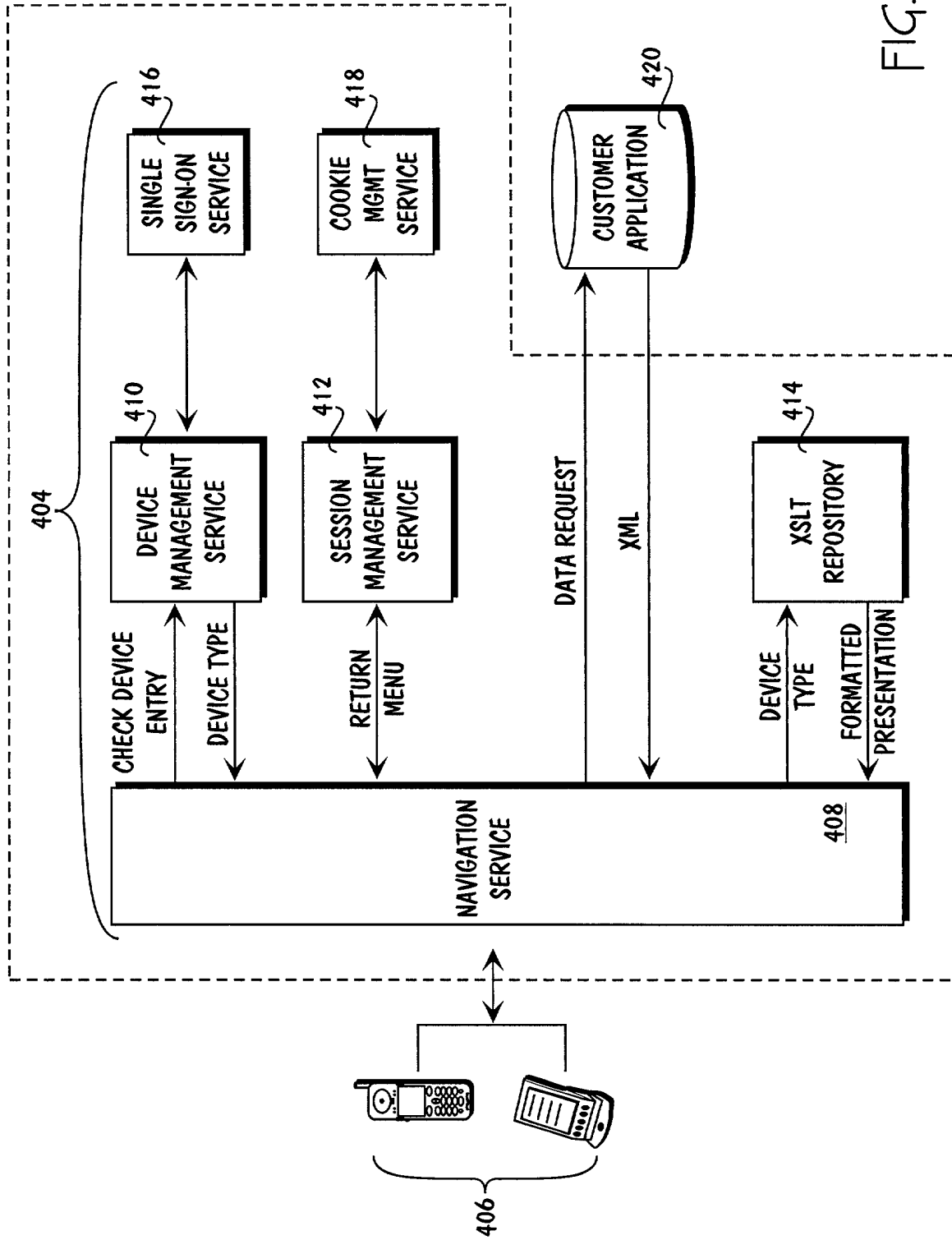


FIG. 4

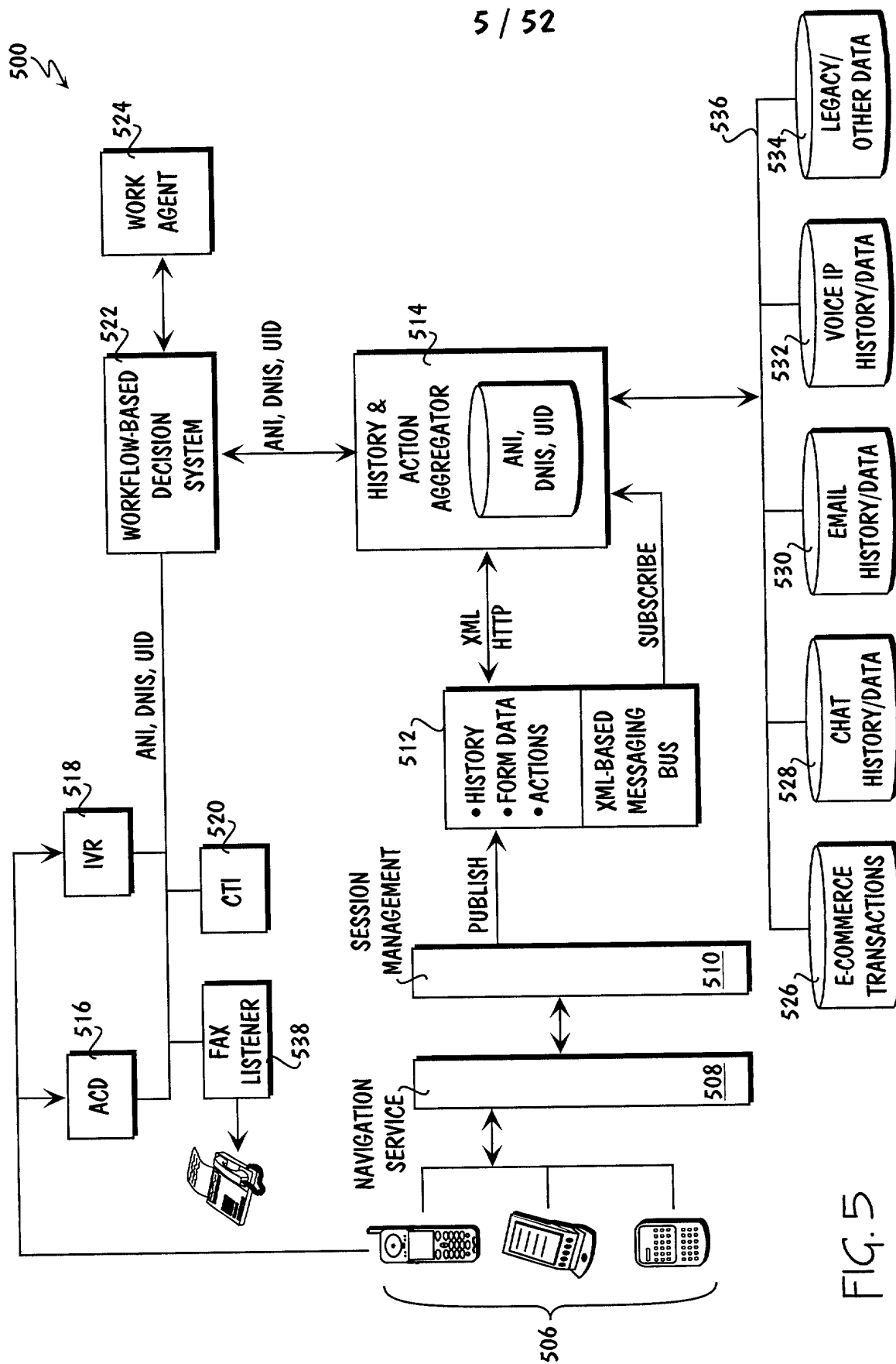


FIG. 5

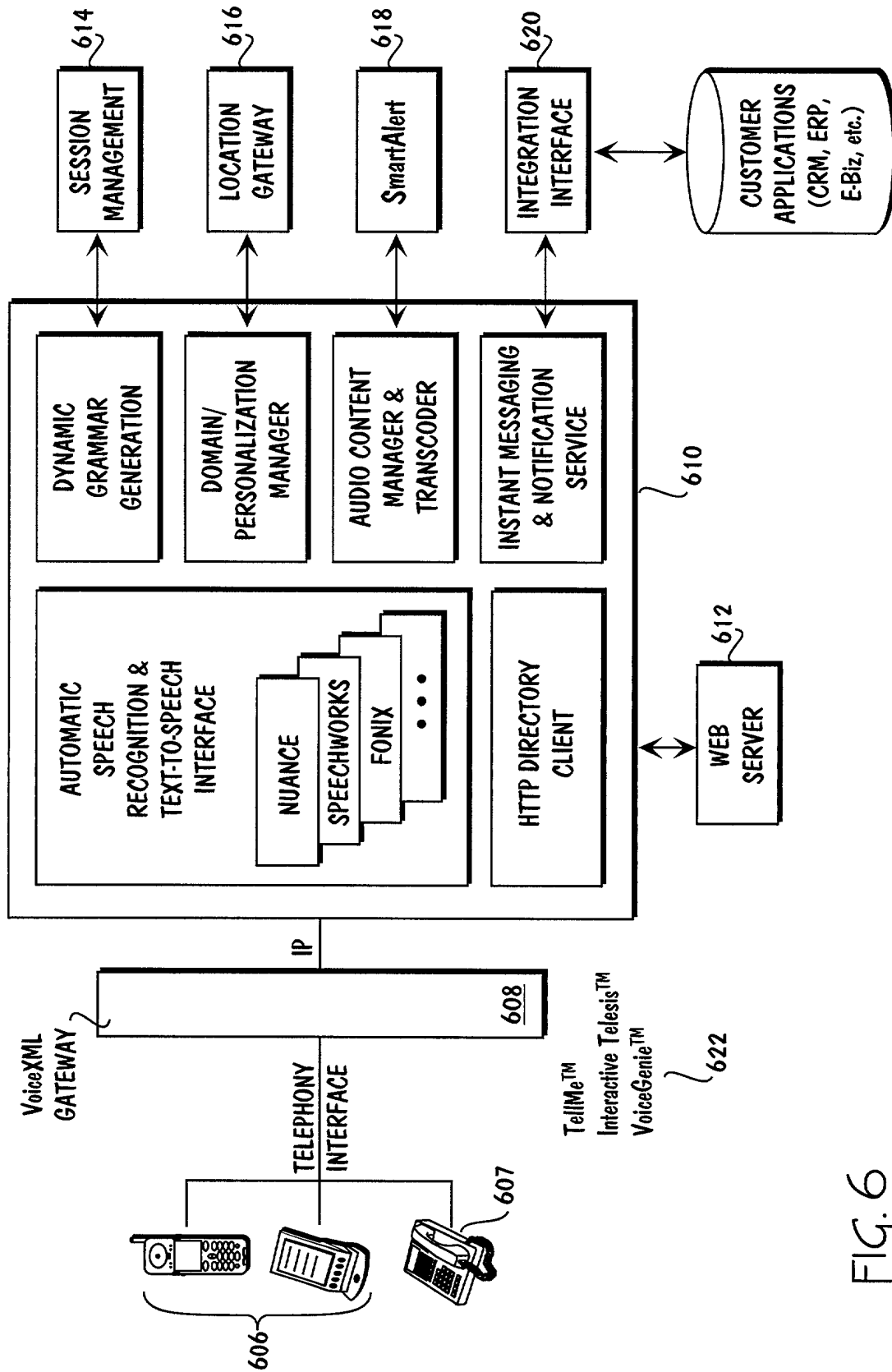


FIG. 6

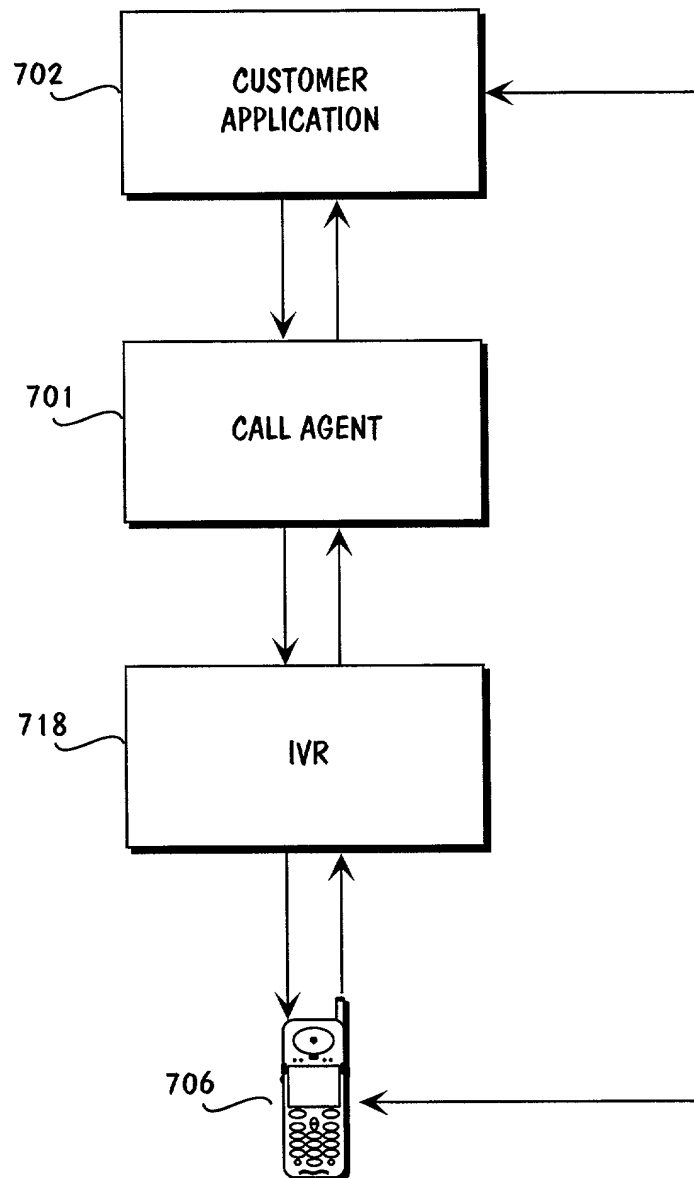


FIG. 7

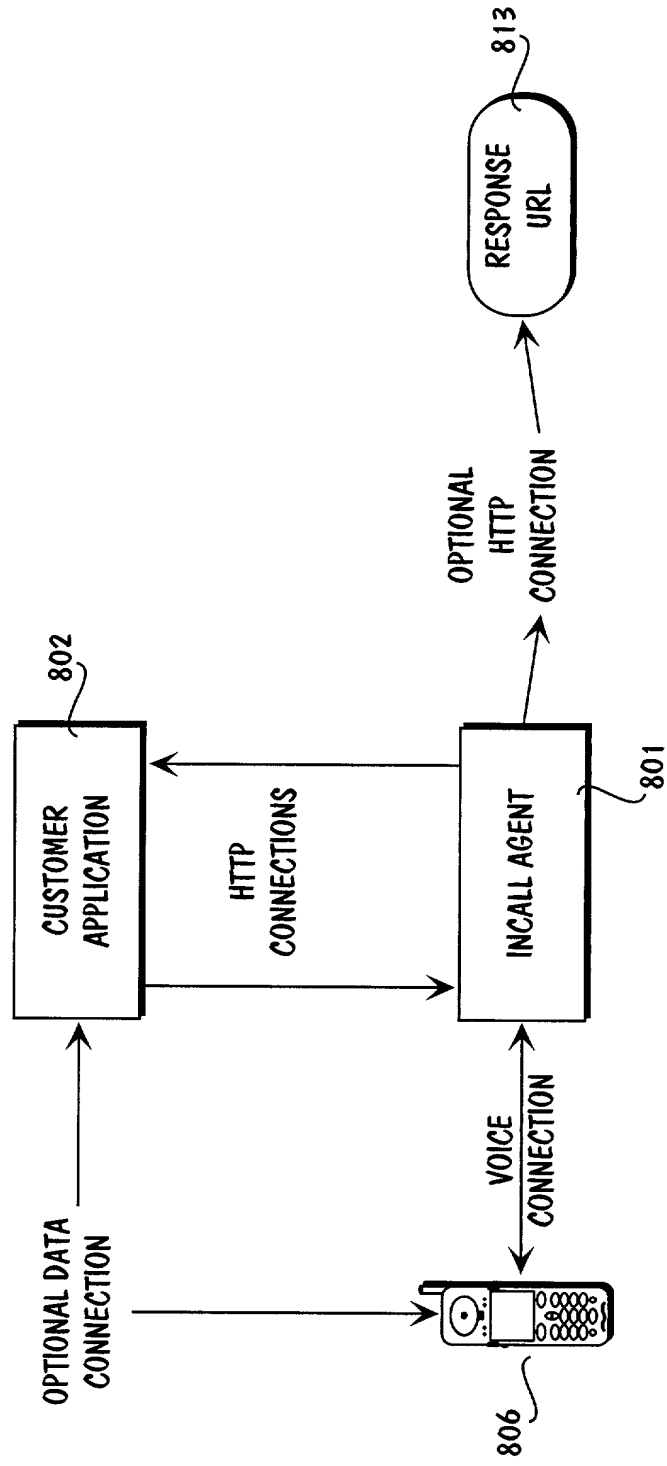


FIG. 8A



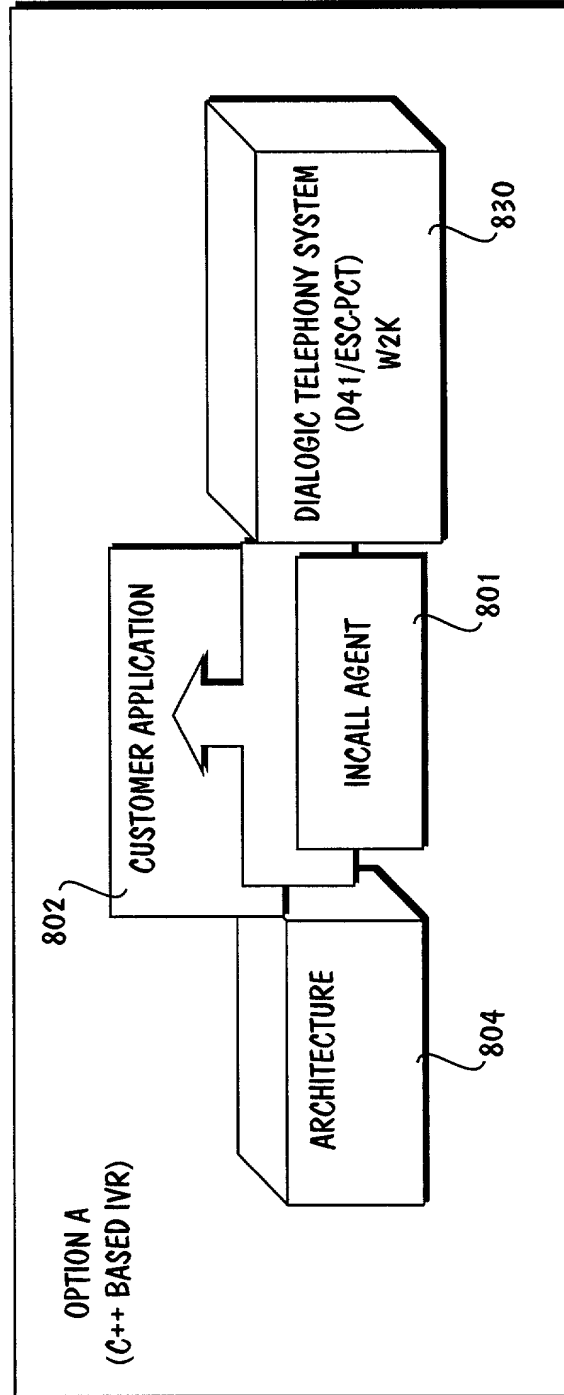


FIG. 8B

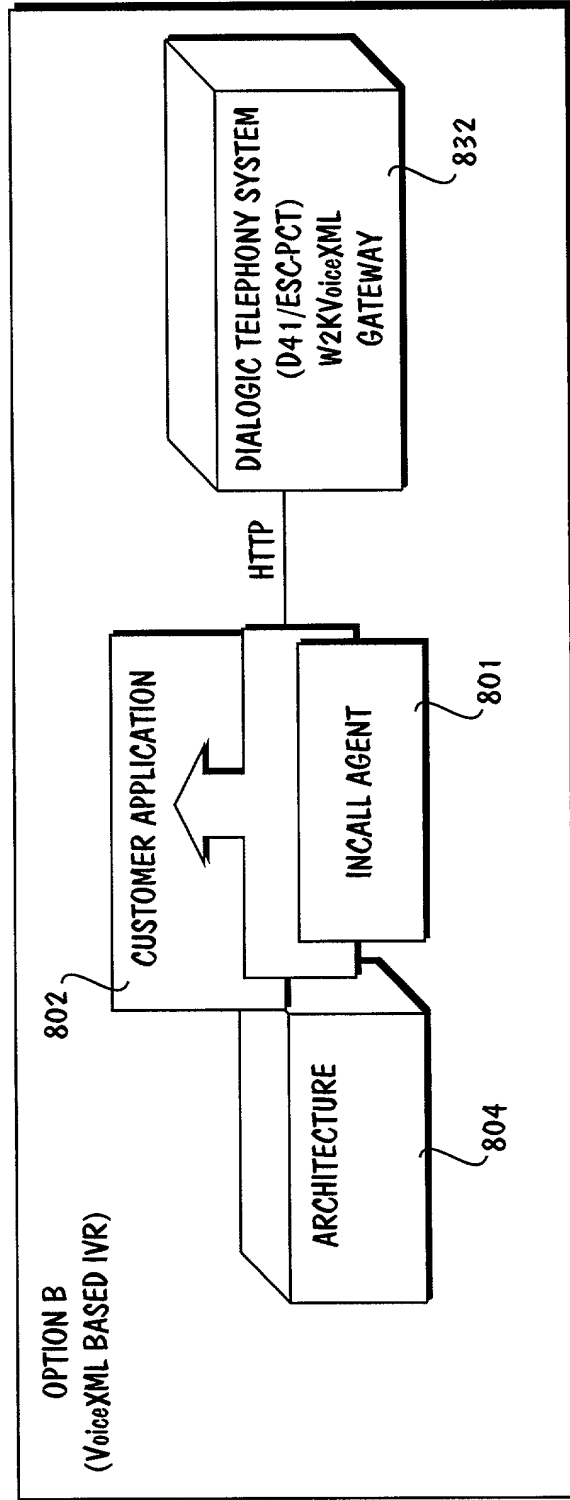


FIG. 8C

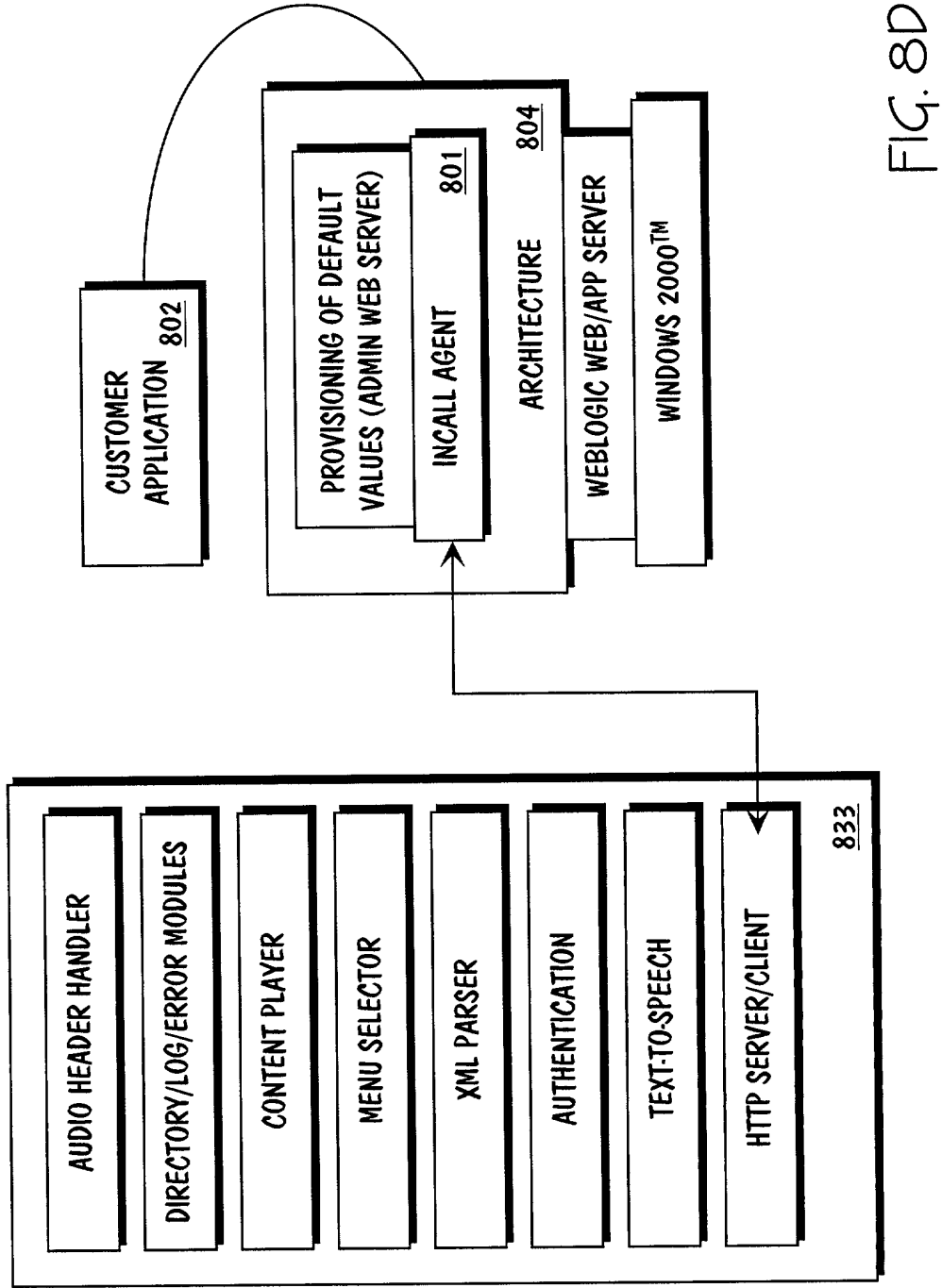


FIG. 8D

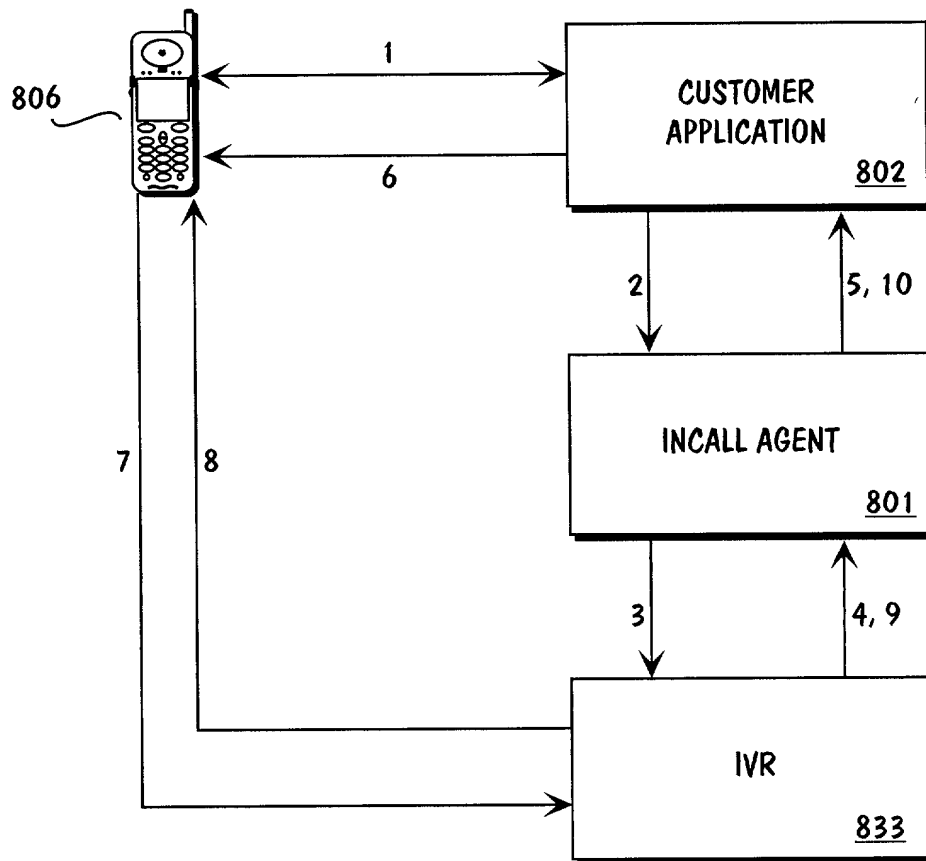


FIG. 8E

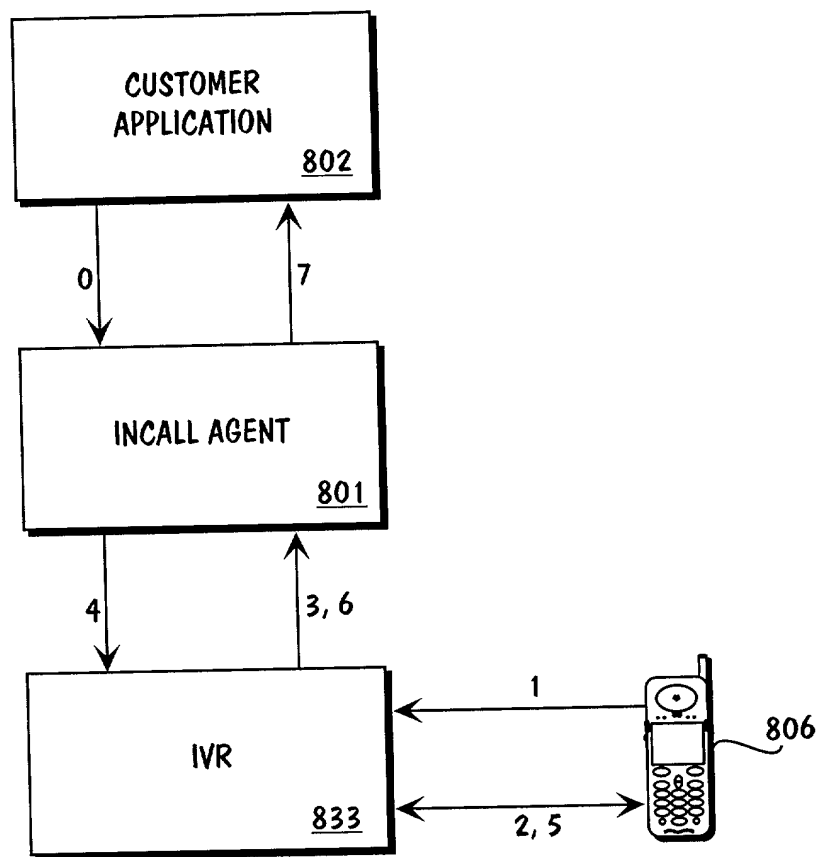


FIG. 8F

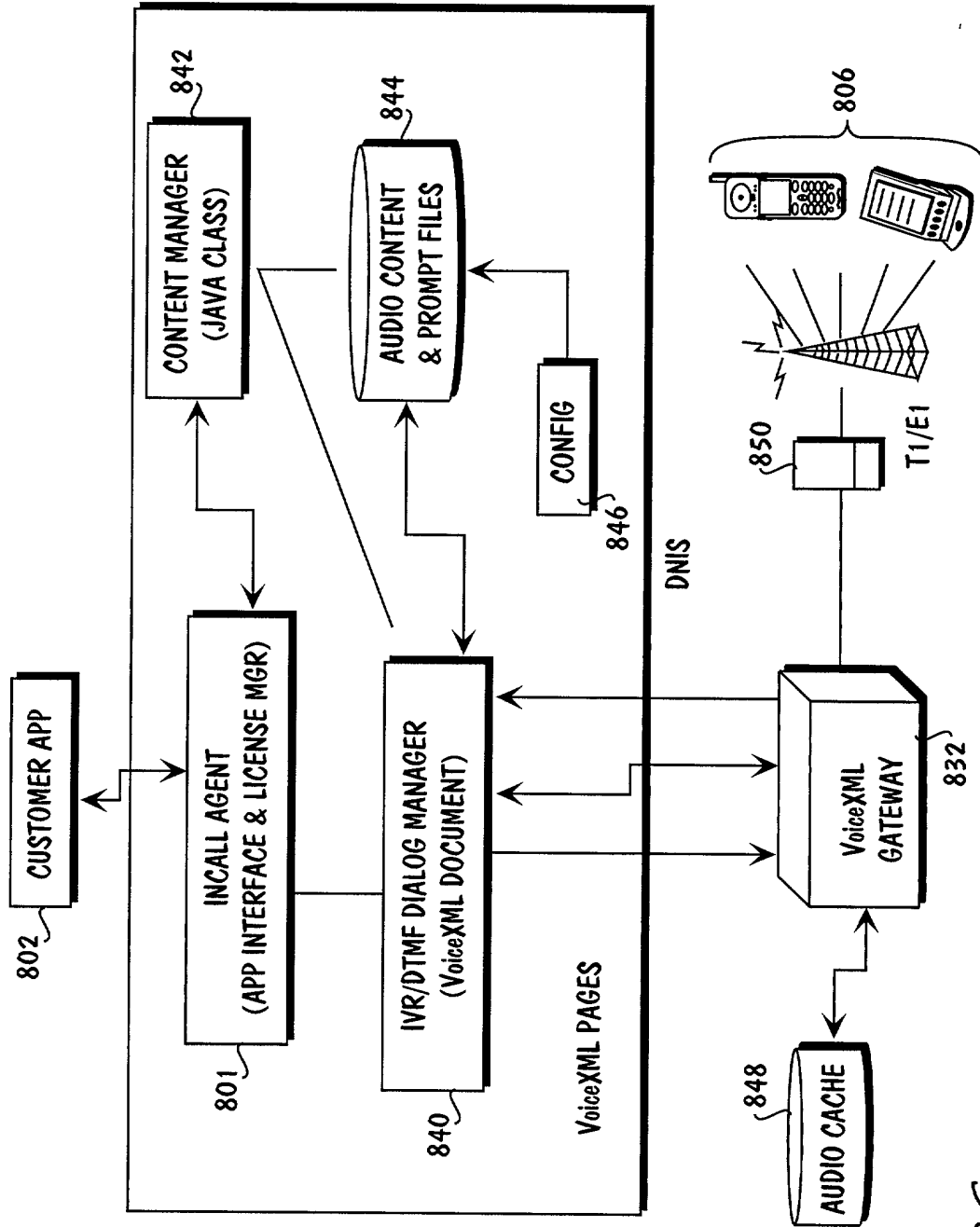


FIG. 8G

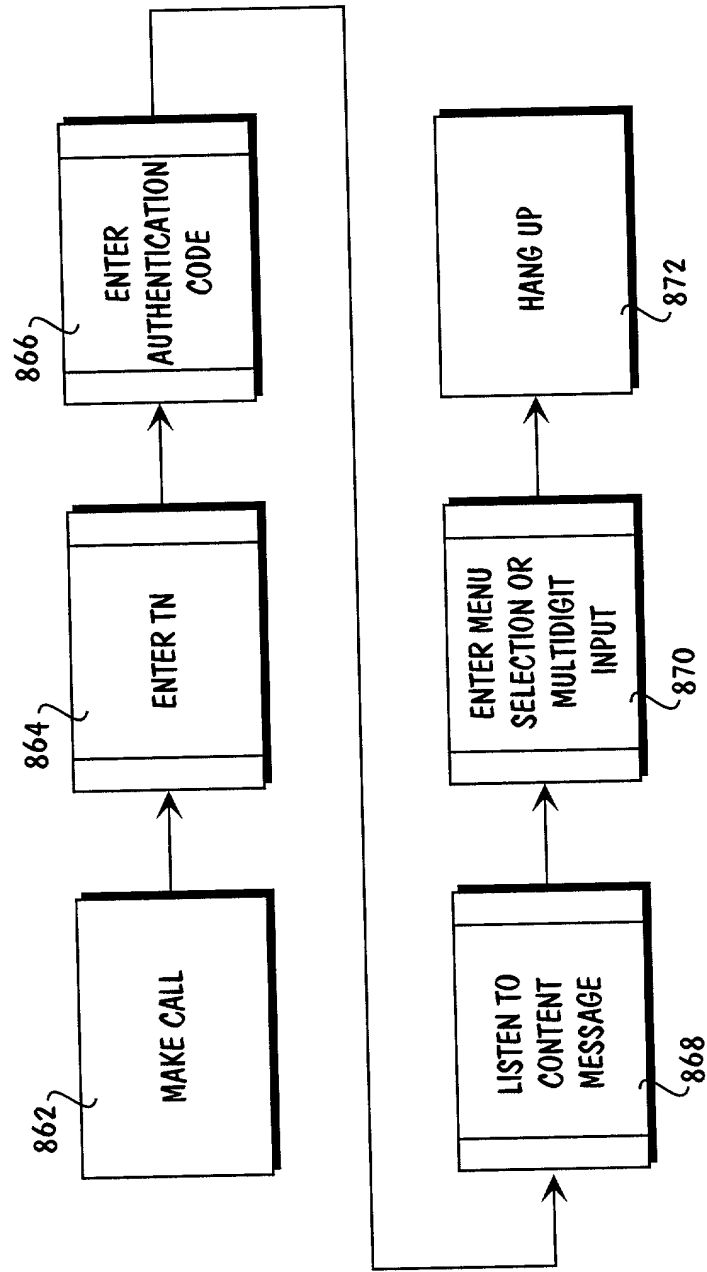


FIG. 84

Element:	Incall Service
Attributes:	title
Children:	Service
Description:	A container. A high level tag that marks the start and end of the XML file. Required.
Element:	Service
Attributes:	name
Parents:	Incall Service
Children:	DNIS   Service_description   Multicall   Percall   Reset
Description:	A container. The parameters in this container describe a service running on a particular phone line (DNIS). Each line running Incall Service must have a service described for that line. Required.
Element:	DNIS
Parents:	Service
Description:	The number the caller dialed to reach the application. Required.
Element:	Service_description
Parents:	Service
Description:	Audio. The description of the service. This audio is played to reassure the caller that they have dialed the right number. Fits the carrier phrase, "Hello. You have reached <System_description>." Required.
Element:	Multicall
Parents:	Service
Children:	Call_info   Authentication   Content   Choices Value_entry
Description:	A container. The parameters specified in Multicall are to be used as default values for all the calls for the service specified in Service. Any tag may be specified in Multicall. Parameters set here act as default values for all calls for that service until another Multicall file for that service is specified. Optional.
Element:	Percall
Parents:	Service
Children:	Call
Description:	A container. Contains the list of calls to be made, one call per Call tag. Required if no Multicall tag specified.
Element:	Call
Attributes:	id
Parents:	Percall
Children:	Call_info   Authentication   Content   Choices   Value_entry   Reset
Description:	A container. Contains information for a specific call. Required if there is a Percall tag.

FIG. 9A



Element:	Reset
Parents:	Service   Call
Description:	Resets/Cancels a particular call (if used as a child for Call) or all potential call for a particular service (if used as a child for Service). Optional.
Element:	Call_info
Parents:	Multicall   Call
Children:	Phone_number   Response_url
Description:	A container. Contains information about the call, beyond the dialog. Required in either Multicall or Call or both.
Element:	Authentication
Parents:	Multicall   Call
Children:	Authentication_code_description   Authentication_code   Expected_caller
Description:	A container. Contains tags that specify the information necessary for ensuring that the caller is authorized to use the service. Authentication is indicated if there is an Authentication_code passed in from the customer's application. If there is an authentication_code, there must also be a description of that code. Optional.
Element:	Content
Parents:	Multicall   Call
Description:	Audio. The content message to be played to the caller. The content may be an audio file (*.wav), a text file (*.txt), or raw text (enclosed in double quotes). Optional.
Element:	Value_entry
Parents:	Multicall   Call
Attributes:	mindigits   maxdigits
Description:	Audio. A description of the entry to be entered by the called party. Must fit carrier phrase, "Please enter..." and "You will be asked for..." Either Choices or Value_entry, but not both, may be specified. Optional.
Element:	Choices
Parents:	Multicall   Call
Children:	Choice   Transfer
Description:	A container. Contains information about the list of choices that will be presented to the caller during the call. Optional.
Element:	Phone_number
Parents:	Call_info
Description:	Phone number from which Expected_caller is expected to call. Required.

FIG. 9B

Element:	Expected_caller
Parents:	Authentication
Description:	Audio. The name of the person expected to be calling from a given phone number. Optional.

Element:	Response_url
Parents:	Call_info
Description:	URL that Incall Service is to use to return status information about the call to the customer application. Optional.
Element:	Authentication_code_description
Parents:	Authentication
Description:	Audio. Description of the authentication code the caller will be asked to enter. Fits the carrier phrase, "Please enter <authentication_code_description>." For example, "Please enter your account number." Required for each Authentication tag.
Element:	Authentication_code
Parents:	Authentication
Description:	The digit string value of the caller's authentication_code_description. That is, the Authentication_code is the value that the caller must enter in order to continue with the call. Required for each Authentication tag.
Element:	Choice
Parents:	Choices
Children:	Choice_description   Choice_value
Description:	A container. Describes the choices that are available to the caller. There is usually more than one Choice tag per Choices tag. Optional.
Element:	Transfer
Parents:	Choices
Children:	Transfer_description   Transfer_number
Description:	A container. Describes the transfer option available to the caller. If there is a transfer option, the value that the caller presses is "0" in order to transfer. Only one Transfer tag is allowed per Choices tag. Optional.
Element:	Choice_description
Parents:	Choice
Description:	Audio. Describes the option the caller may choose. Fits the carrier phrase, "If you would like <choice_description>, press one." Required for each Choice tag.

FIG. 9C

<b>Element:</b>	<b>Choice_value</b>
<b>Parents:</b>	<b>Choice</b>
<b>Description:</b>	<b>A single digit number that indicate the touch-tone that the caller should press in order to select the associated choice. Note that if there is a Transfer tag, "0" cannot be used for a Choice_value. Required for each Choice tag.</b>
<b>Element:</b>	<b>Transfer_description</b>
<b>Parents:</b>	<b>Transfer</b>
<b>Description:</b>	<b>Audio. Describes the person or thing (e.g., IVR) the caller would be transferred to should they press zero. Required for each Transfer tag.</b>
<b>Element:</b>	<b>Transfer_number</b>
<b>Parents:</b>	<b>Transfer</b>
<b>Description:</b>	<b>The phone number to which the caller would be transferred, if they press zero. Required for each Transfer tag.</b>

FIG. 9D

FIG. 10A

## 1. Incall\_Mfile\_SC1\_1.xml

```

<?xml version='1.0'?>
<Incall Service title="Joe's Sales M file">

  <Service name="movie sales">
    <DNIS>5122900001</DNIS>
    <Service_description>"Joe's Movie Sales"</Service_description>

    <Multicall>
      <Authentication>
        <Authentication_code_description>"movie pin"</Authentication_code_description>
      </Authentication>

      <Choices>
        <Choice>
          <Choice_description>C:\Mob\purchase_DVD.wav</Choice_description>
          <Choice_value>1</Choice_value>
        </Choice>
        <Choice>
          <Choice_description>c:\Mob\purchase_movie_video.wav</Choice_description>
          <Choice_value>2</Choice_value>
        </Choice>

        <Choice>
          <Choice_description>C:\Mob\purchase_soundtrack.wav</Choice_description>
          <Choice_value>3</Choice_value>
        </Choice>

        <Transfer>
          <Transfer_description>"Kathy's phone"</Transfer_description>
          <Transfer_number>460</Transfer_number>
        </Transfer>

      </Choices>
    </Multicall>
  </Service>

  <Service name="theater sales">
    <DNIS>5122900003</DNIS>
    <Service_description>"Joe's Stage Productions Stuff Sales"</Service_description>

    <Multicall>

```

## CONTINUED FROM FIG.10A

```
<Authentication>
  <Authentication_code_description>"theater pin"</Authentication_code_description>
</Authentication>

<Choices>
  <Choice>
    <Choice_description>C:\Mob\purchase_theater_video.wav</Choice_description>
    <Choice_value>1</Choice_value>
  </Choice>

  <Choice>
    <Choice_description>C:\Mob\purchase_playbill.wav</Choice_description>
    <Choice_value>2</Choice_value>
  </Choice>
</Choices>
</Multicall>
</Service>

</Incall Service>
```

FIG. 10B

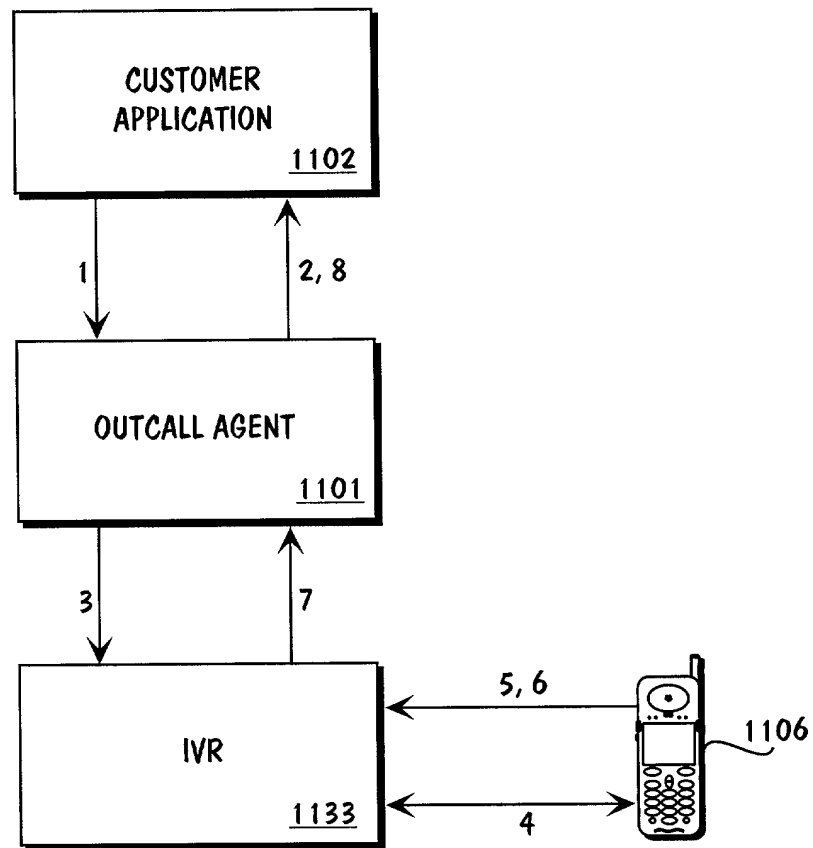


FIG. IIA

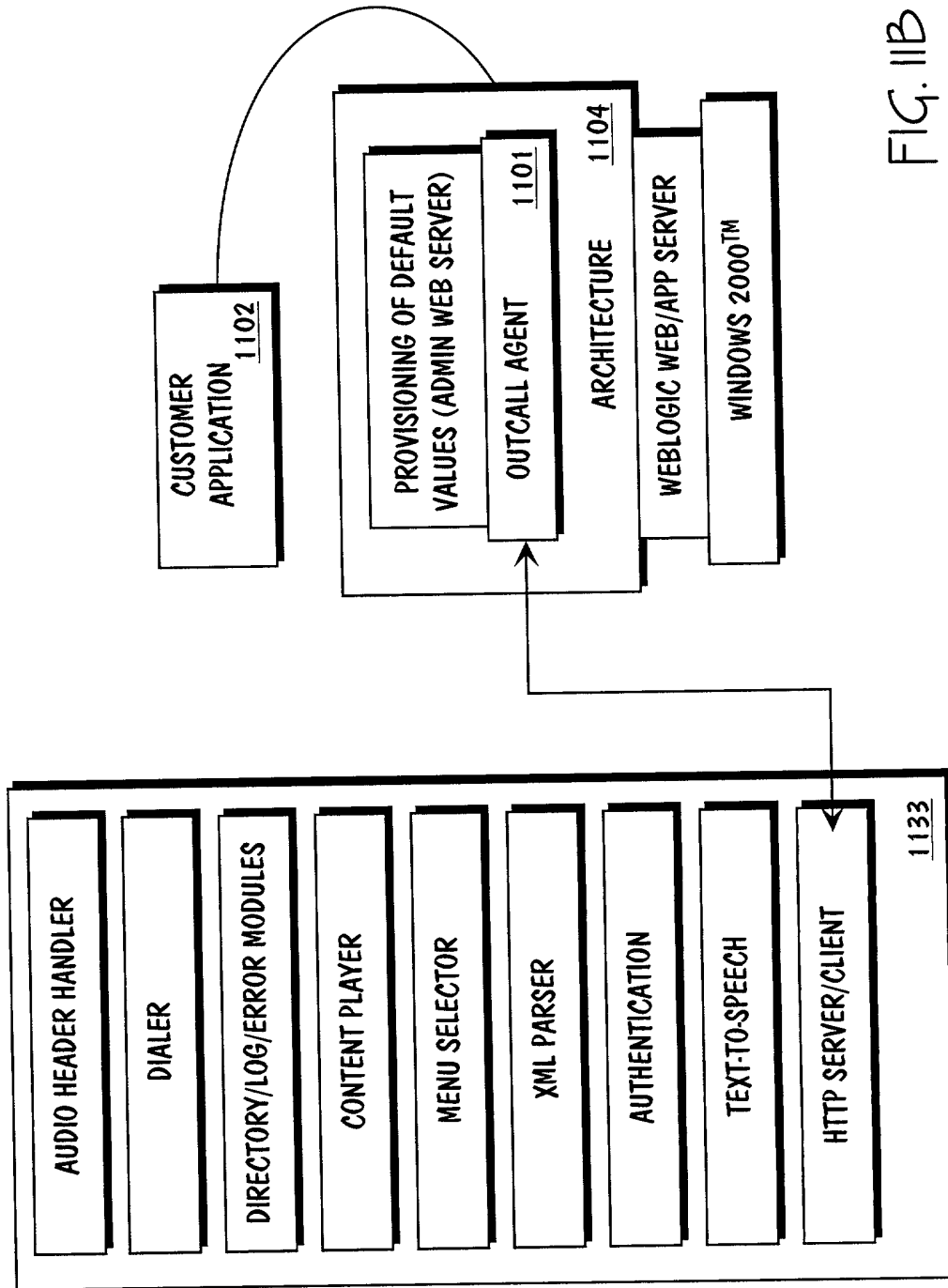


FIG. 11B

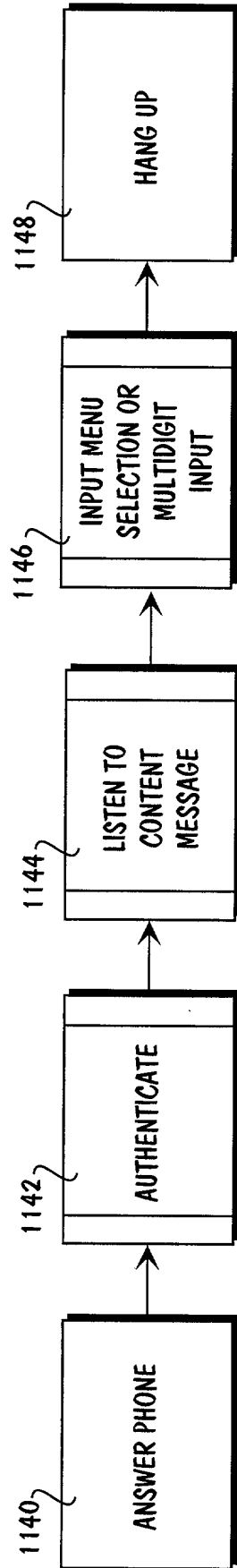


FIG. 11C



<b>Element:</b>	<b>Outcall Service</b>
<b>Attributes:</b>	title
<b>Children:</b>	Multicall   Percall
<b>Description:</b>	A container. A high level tag to mark the start and end of the XML file. Required.
<b>Element:</b>	<b>Service</b>
<b>Attributes:</b>	name
<b>Parents:</b>	Outcall Service
<b>Children:</b>	Service_description   Multicall   Percall   Reset
<b>Description:</b>	A container. The parameters in this container describe a service. There can be several services set up for Outcall. This tag allows the developer to group Multicall values. Required.
<b>Element:</b>	<b>Multicall</b>
<b>Parents:</b>	Service
<b>Children:</b>	Call_info   Introduction   Authentication   Content   Value_entry   Choices
<b>Description:</b>	A container. Indicates the parameters specified are to be used as default values for all the calls. Parameters set here act as default values for all calls until another multicall file is specified. Optional.
<b>Element:</b>	<b>Percall</b>
<b>Parents:</b>	Service
<b>Children:</b>	Call
<b>Description:</b>	A container. Contains the list of calls to be made, one call per Call tag. Required if no Multicall tag specified.
<b>Element:</b>	<b>Reset</b>
<b>Parents:</b>	Service   Call
<b>Description:</b>	Resets values for parent tag and all its children tags already specified. Useful for canceling queued calls before they're made. Optional.
<b>Element:</b>	<b>Call</b>
<b>Attributes:</b>	id
<b>Parents:</b>	Percall
<b>Children:</b>	Call_info   Introduction   Authentication   Content   Value_entry   Choices   Reset
<b>Description:</b>	A container. Contains information for a specific call. Required if there is a Percall tag.
<b>Element:</b>	<b>Call_info</b>
<b>Parents:</b>	Multicall   Call
<b>Children:</b>	Phone_number   Response_url   Ensure_completion
<b>Description:</b>	A container. Contains information about the call, beyond the dialog. Required in either Multicall or Call or both.

FIG. 12A

<b>Element:</b>	<b>Introduction</b>
<b>Parents:</b>	<b>Multicall   Call</b>
<b>Children:</b>	<b>Recipient   Sender</b>
<b>Description:</b>	<b>A container. Contains the information for the introduction portion of the call, the sender and the desired recipient. Required in either Multicall or Call or both.</b>
<b>Element:</b>	<b>Authentication</b>
<b>Parents:</b>	<b>Multicall   Call</b>
<b>Children:</b>	<b>Authentication_code_description   Authentication_code</b>
<b>Description:</b>	<b>A container. Contains tags that specify the information necessary for ensuring that the called party is the intended recipient of the call. Optional. Authentication is indicated if there is an authentication_code passed in from the customer's application. If there is an authentication_code, there must also be a description of that code and a recipient.</b>
<b>Element:</b>	<b>Content</b>
<b>Parents:</b>	<b>Multicall   Call</b>
<b>Description:</b>	<b>Audio. The content message to be played to the called party. The content may be an audio file (*.wav), a text file (*.txt), or raw text (enclosed in double quotes). Optional.</b>
<b>Element:</b>	<b>Value_entry</b>
<b>Parents:</b>	<b>Multicall   Call</b>
<b>Attributes:</b>	<b>mindigits   maxdigits</b>
<b>Description:</b>	<b>Audio. A description of the entry to be entered by the called party. Must fit carrier phrase, "Please enter..." and "You will be asked for..." Either Choices or Value_entry, but not both, may be specified.</b>
<b>Element:</b>	<b>Choices</b>
<b>Parents:</b>	<b>Multicall   Call</b>
<b>Children:</b>	<b>Choice   Transfer</b>
<b>Description:</b>	<b>A container. Contains information about the list of choices that will be presented to the user during the call. Either Choices or Value_entry, but not both, may be specified. Optional.</b>
<b>Element:</b>	<b>phone_number</b>
<b>Parents:</b>	<b>Call_info</b>
<b>Description:</b>	<b>Phone number to be called. Must include every digit that is to be dialed. (e.g., 9 to get an outside line, 1 for long distance). Required.</b>
<b>Element:</b>	<b>Response_url</b>
<b>Parents:</b>	<b>Call_info</b>
<b>Description:</b>	<b>URL that Outcall service is to use to return status information about the call to the customer application. Optional.</b>

FIG. 12B

Element:	Ensure_completion
Parents:	Call_info
Description:	The number of times that Outcall service will call a person back, if the person has authenticated. These callbacks increase the likelihood of the completion of a desired call that was dropped accidentally (for instance, by the network). Optional. Default is 0.
Element:	Recipient
Parents:	Introduction
Description:	Audio. Usually text to be converted to speech. Fits the carrier phrase, "This is an automated call for <Recipient> from <Sender>." If Recipient is omitted from the XML, no authentication is done; rather, the called party is asked to press 1 to continue. Optional.
Element:	Sender
Parents:	Introduction
Description:	Audio. Fits the carrier phrase, "This is an automated call from <Sender>." Required.
Element:	Authentication_code_description
Parents:	Authentication
Description:	Audio. Description of the authentication code the party called will be asked to enter. Fits the carrier phrase, "Please enter <authentication_code_description>." For example. "Please enter your account number." Required for each Authentication tag.
Element:	Authentication_code
Parents:	Authentication
Description:	The digit string value of the called party's authentication_code description. That is, the Authentication_code is the value that the called party must enter in order to continue with the call. Required for each Authentication tag.
Element:	Choice
Parents:	Choices
Children:	Choice_description   Choice_value
Description:	A container. Describes the choices that are available to the called party. There is usually more than one Choice tag per Choices tag. Optional.
Element:	Transfer
Parents:	Choices
Children:	Transfer_description   Transfer_number
Description:	A container. Describes the transfer option to the called party. If there is a transfer option, the value that the called party presses is "0" in order to transfer. Only one Transfer tag is allowed per Choices tag. Optional.

FIG. 12C

Element:	Choice_description
Parents:	Choice
Description:	Audio. Describes the option the called party may choose. Fits the carrier phrase, "If you would like <choice_description>, press 1." Required for each Choice tag.
Element:	Choice_value
Parents:	Choice
Description:	A single digit number that indicates the touch-tone that the called party should press in order to select the associated choice. Not that if there is a Transfer tag, "0" cannot be used for a Choice_value. Required for each Choice tag.
Element:	Transfer_description
Parents:	Transfer
Description:	Audio. Describes the person or thing the called party would be transferred to should they press zero. Required for each Transfer tag.
Element:	Transfer_number
Parents:	Transfer
Description:	The phone number to which the called party would be transferred, if they press zero. Required for each Transfer tag,

FIG. 12D

## 1. Multi-call content definition file: OM1\_short.xml

This XML file defines a hypothetical outcall use case where ever called party will be presented with a short audio review of a movie. Then, users will be presented with a menu of two choices (purchase the DVD or purchase the video) or transferring to a call center.

```
<?xml version='1.0'?>
<Outcall service title="Outcall Test M file">
  <Multicall>
    <Call_info>
      <Response_url>http://vp/
mars/servlet/Outcall_serviceResponse</Response_url>
    </Call_info>
    <Content>C:\SmartOutcall\Sounds\princess_bride_x2.wav</Content>
    <Choices>
      <Choice>
        <Choice_description>
          C:\SmartOutcall\Sounds\purchase_DVD.wav
        </Choice_description>
        <Choice_value>1</Choice_value>
      </Choice>
      <Choice>
        <Choice_description>
          C:\SmartOutcall\Sounds\purchase_movie_video.wav
        </Choice_description>
      </Choice>
      <Transfer>
        <Transfer_description>"Kathy's phone"</Transfer_description>
        <Transfer_number>4939880</Transfer_number>
      </Transfer>
    </Choices>
  </Multicall>
</Outcall service>
```

FIG. 13A

## 2. Per-call IVR definition file: OP1\_short.xml

This XML file defines an outcall request using the current content definition (see the previous XML file) by specifying a 10-digit phone number to be called (9252517200) and the 4-digit passcode (4321) to determine if the person who answers the call is really "John Smith" as authorized to hear subsequent audio content.

```
<?xml version='1.0'?>
<Outcall service title="Outcall Test P file">
  <Percall>
    <Call id="12345">
      <Call_info>
        <Phone_number>9252517200</Phone_number>
      </Call_info>
      <Authentication>
        <Authentication_code_description>
          "your authentication code"
        </Authentication_code_description>
        <Authentication_code>4321</Authentication_code>
      </Authentication>
      <Introduction>
        <Sender> "Test system"</Sender>
        <Recipient> "John Smith" </Recipient>
      </Introduction>
    </Call>
  </Percall>
</Outcall service>
```

## GENERIC DIALOG SAMPLE

User: Hello

System: Hello. This is an automated call for <Recipient> from <Sender>. If you are <Recipient>, please enter <Authentication\_code\_description> followed by the pound key.

User: Enters <Authentication\_code>

System: I heard digits\_entered If this is correct, press one.

User: Presses 1

System: Thank you. A message from <Sender> is next. Some important options follow the message. The message is less than one minute long. Beginning of message. <Content> End of message. That was your message. To hear the message again, press the star key. Please choose from one of the following #\_choices choices. If you would like<Choice\_description(1)>, press <Choice\_value(1)>. If you would like <Choice\_description(2)>, press <Choice\_value(2)>... If you would like to be transferred to <Transfer\_description>, press 0.

User: Enters 2

System: To confirm that you would like <Choice\_description(2)>, press one.

User: Enters 1

System: Your choices of <Choice\_description(2)> has been confirmed. Thank you. Good-bye.

FIG. 13B

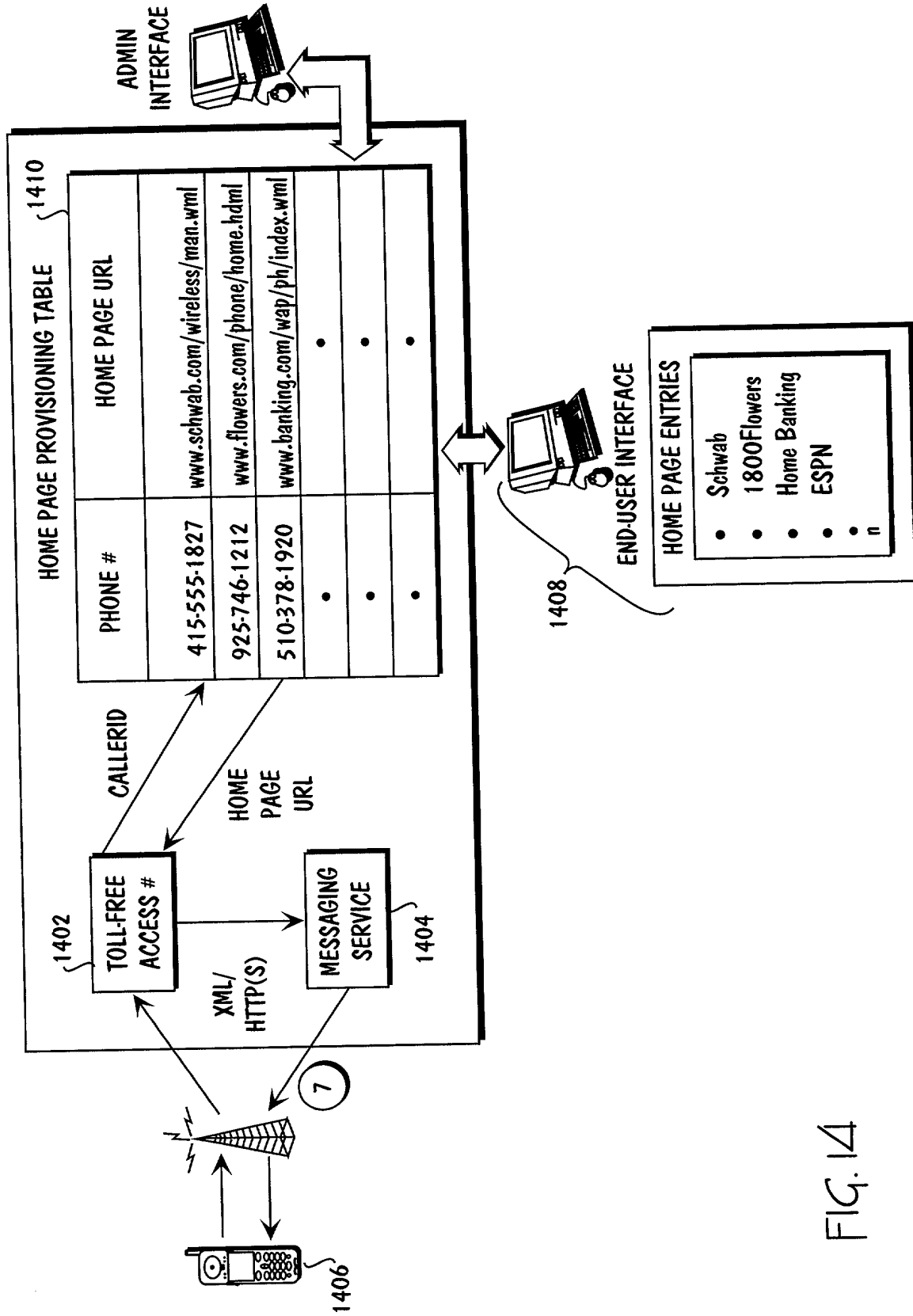


FIG. 14

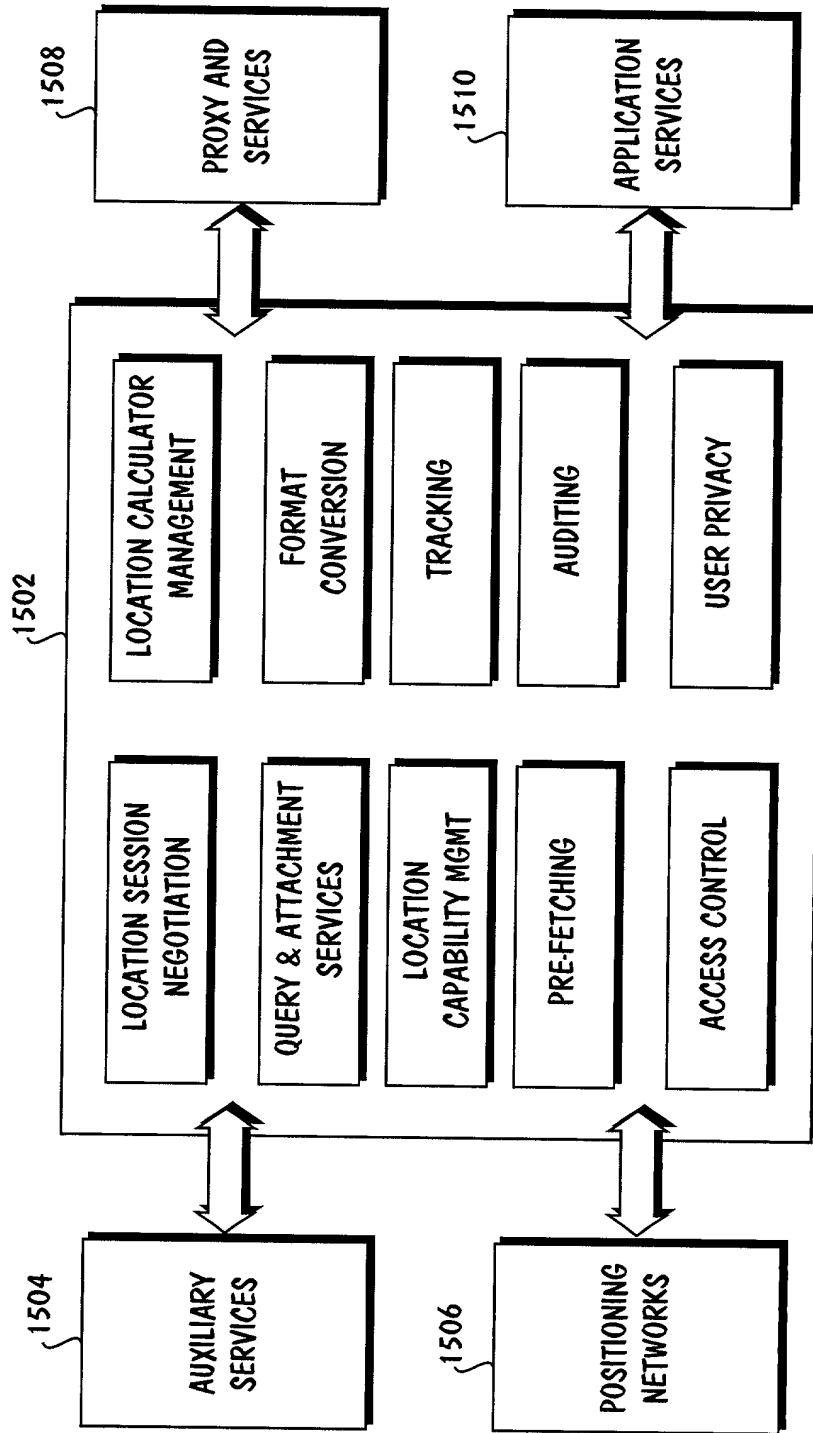
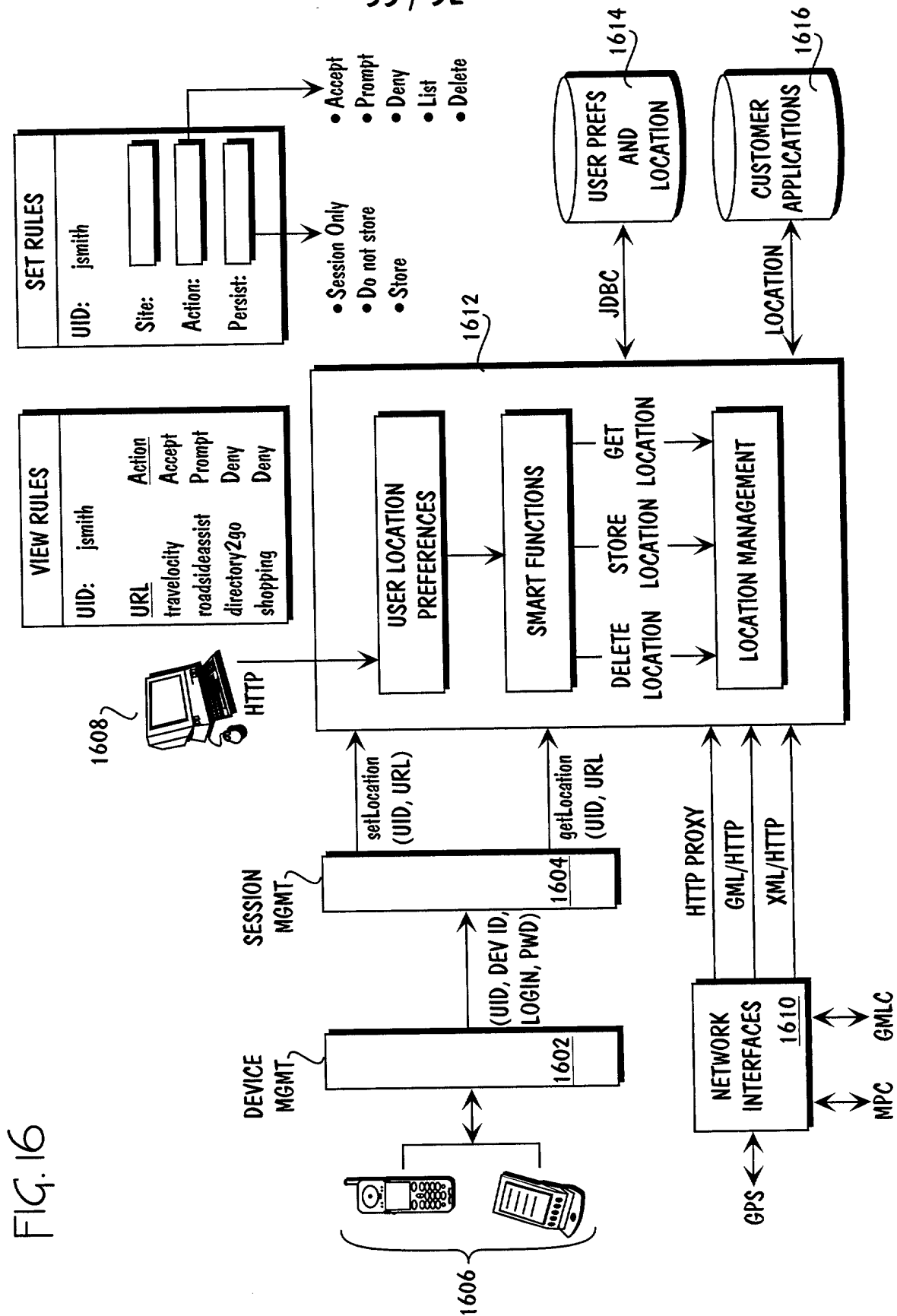


FIG. 15





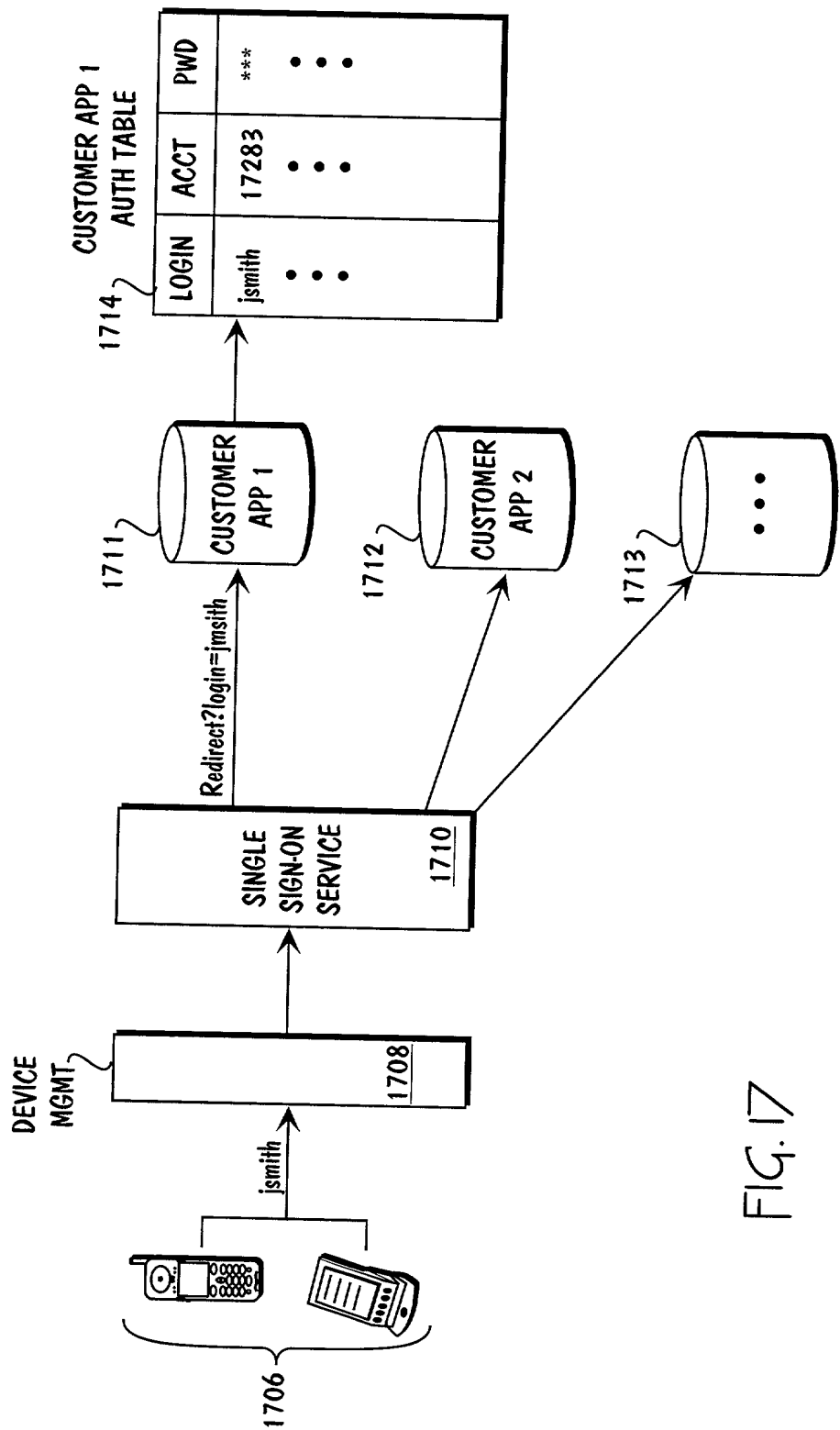


FIG. 17

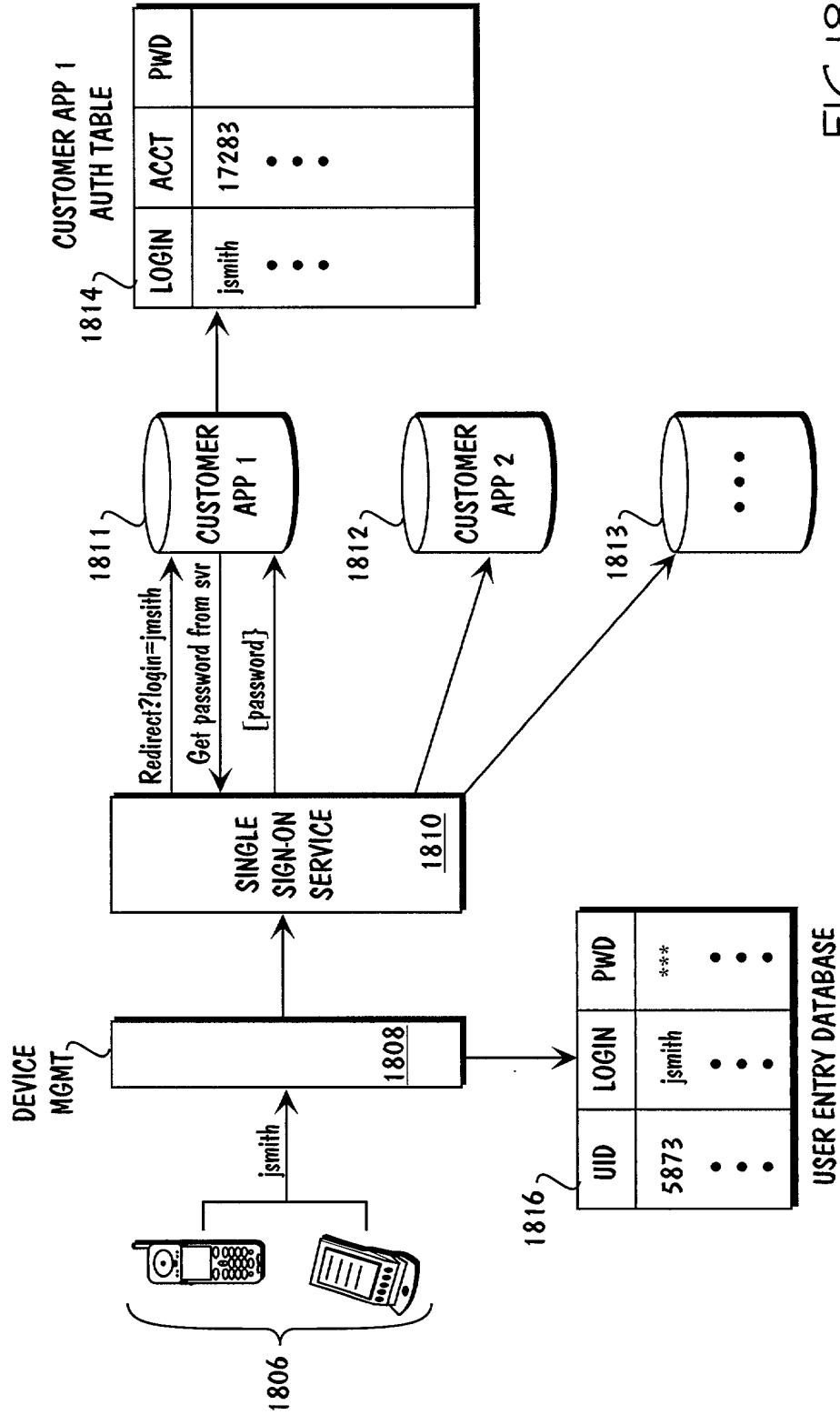


FIG. 18

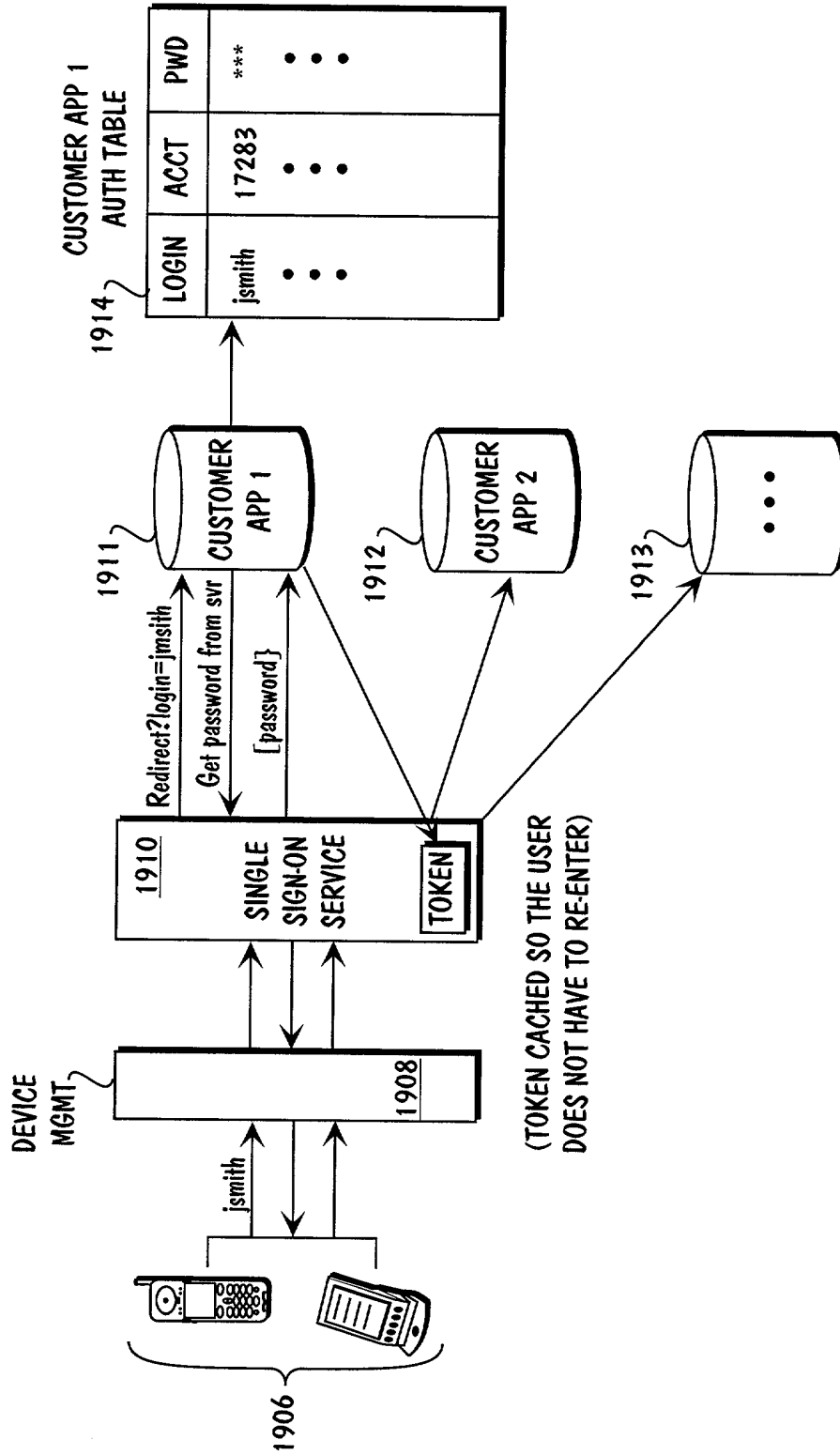
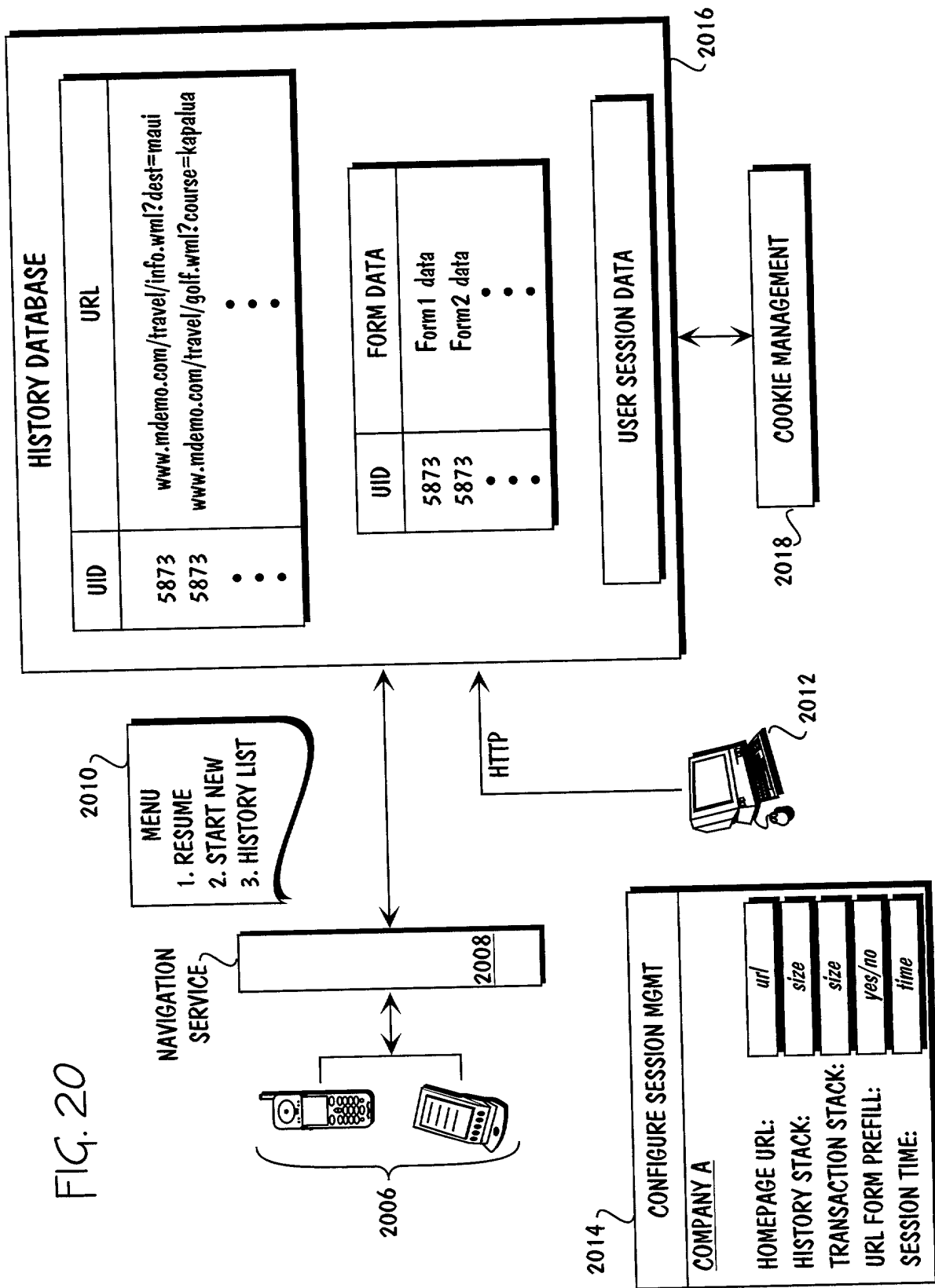


FIG. 19

FIG. 20



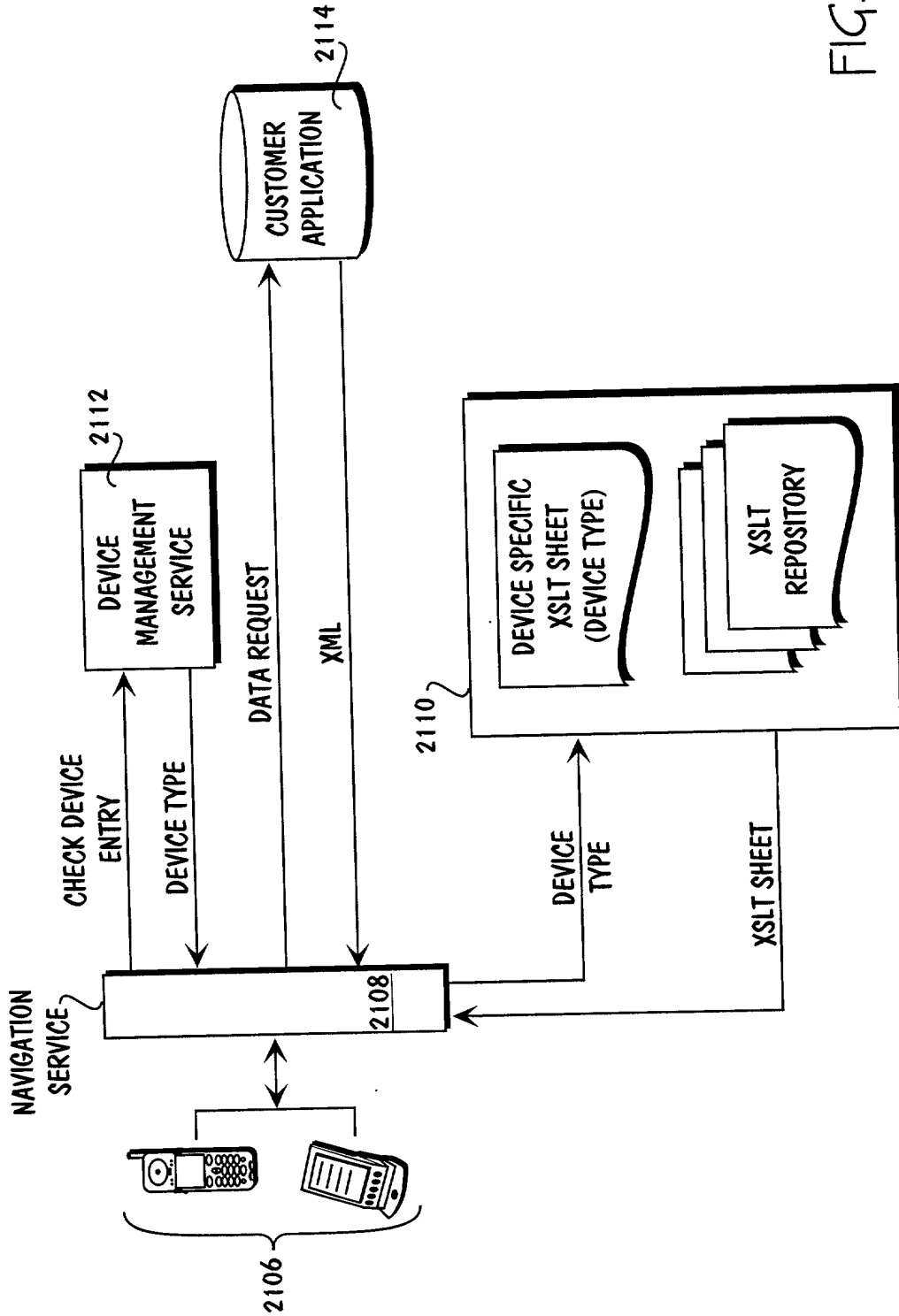
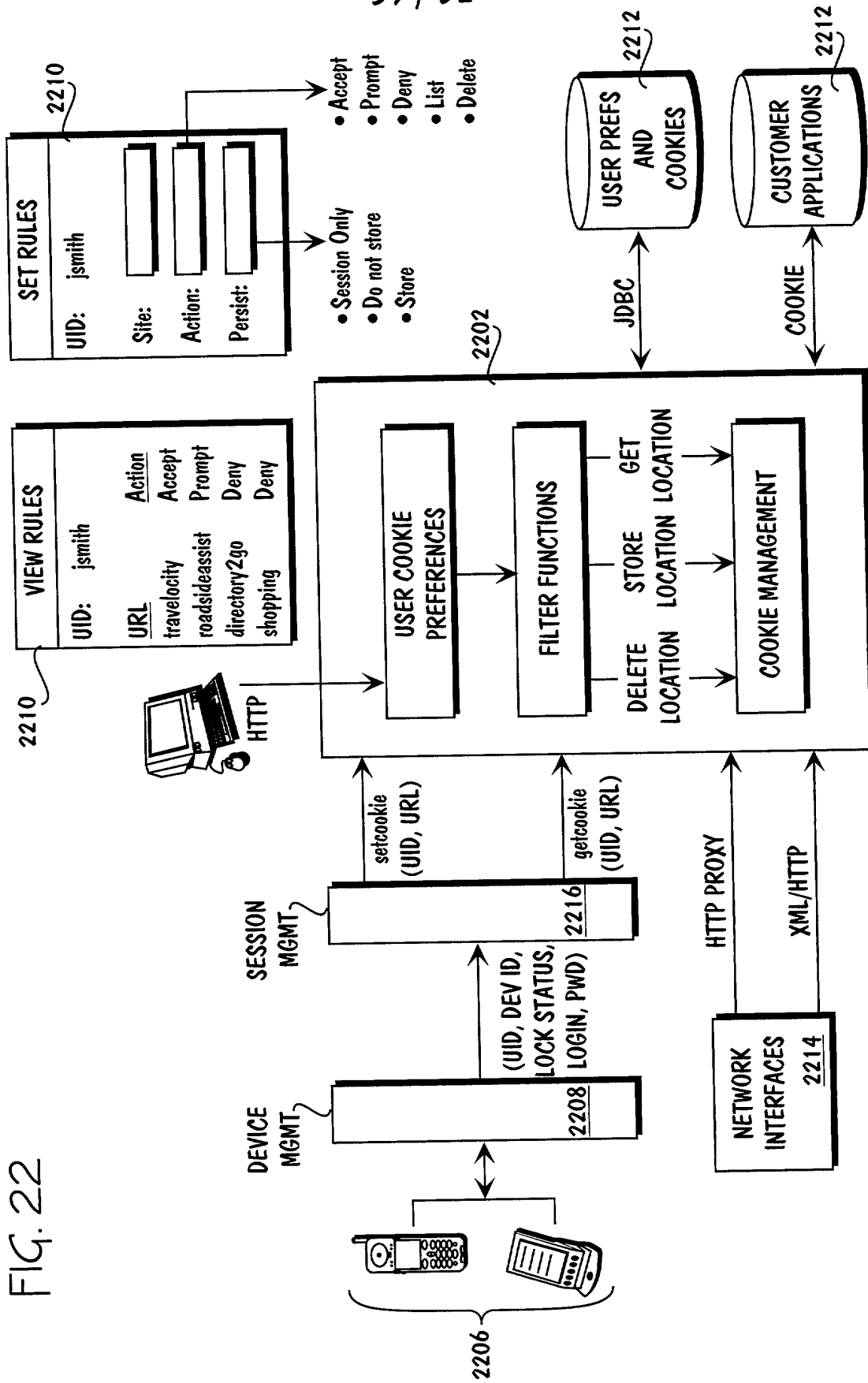


FIG. 21

FIG. 22



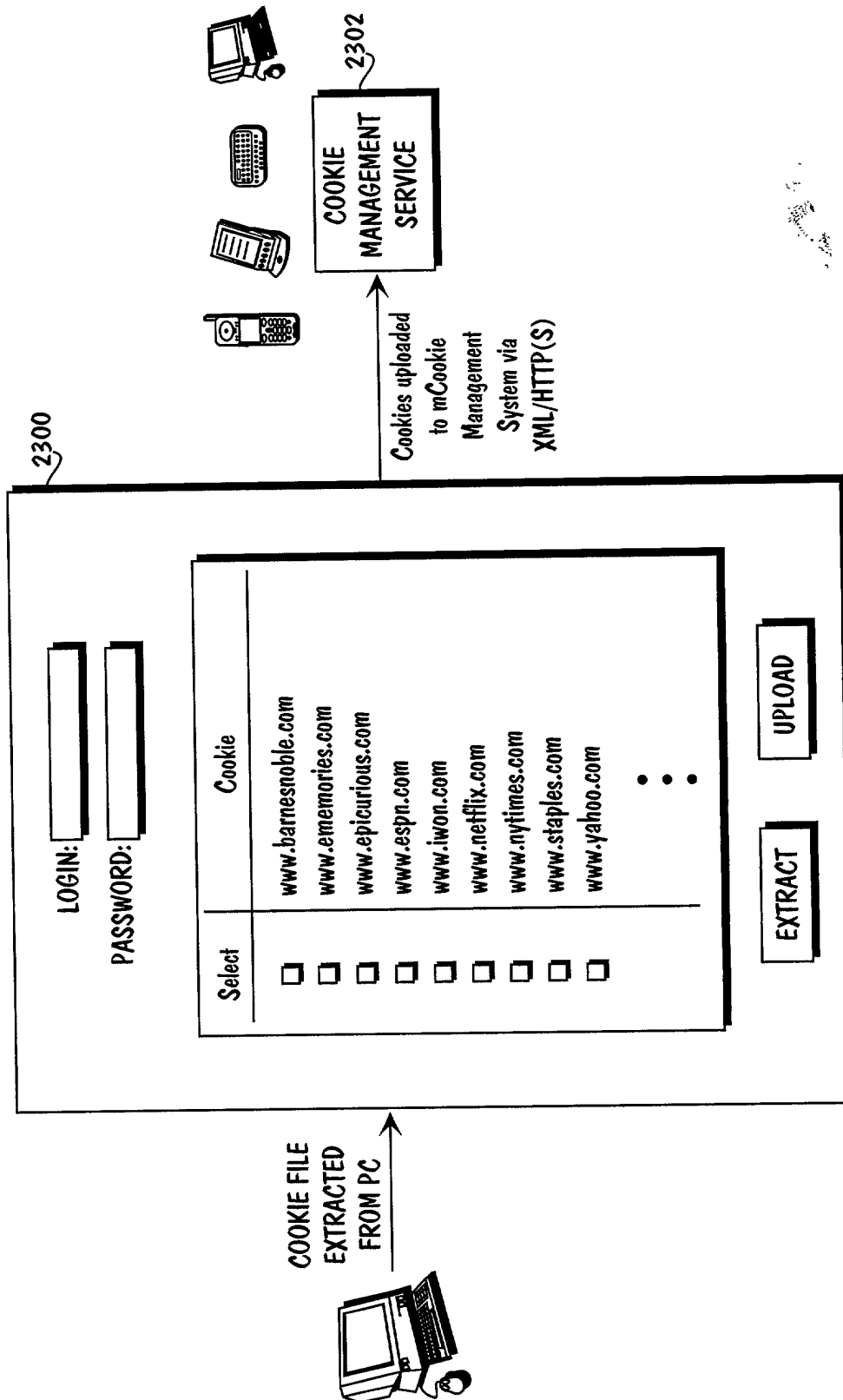


FIG. 23



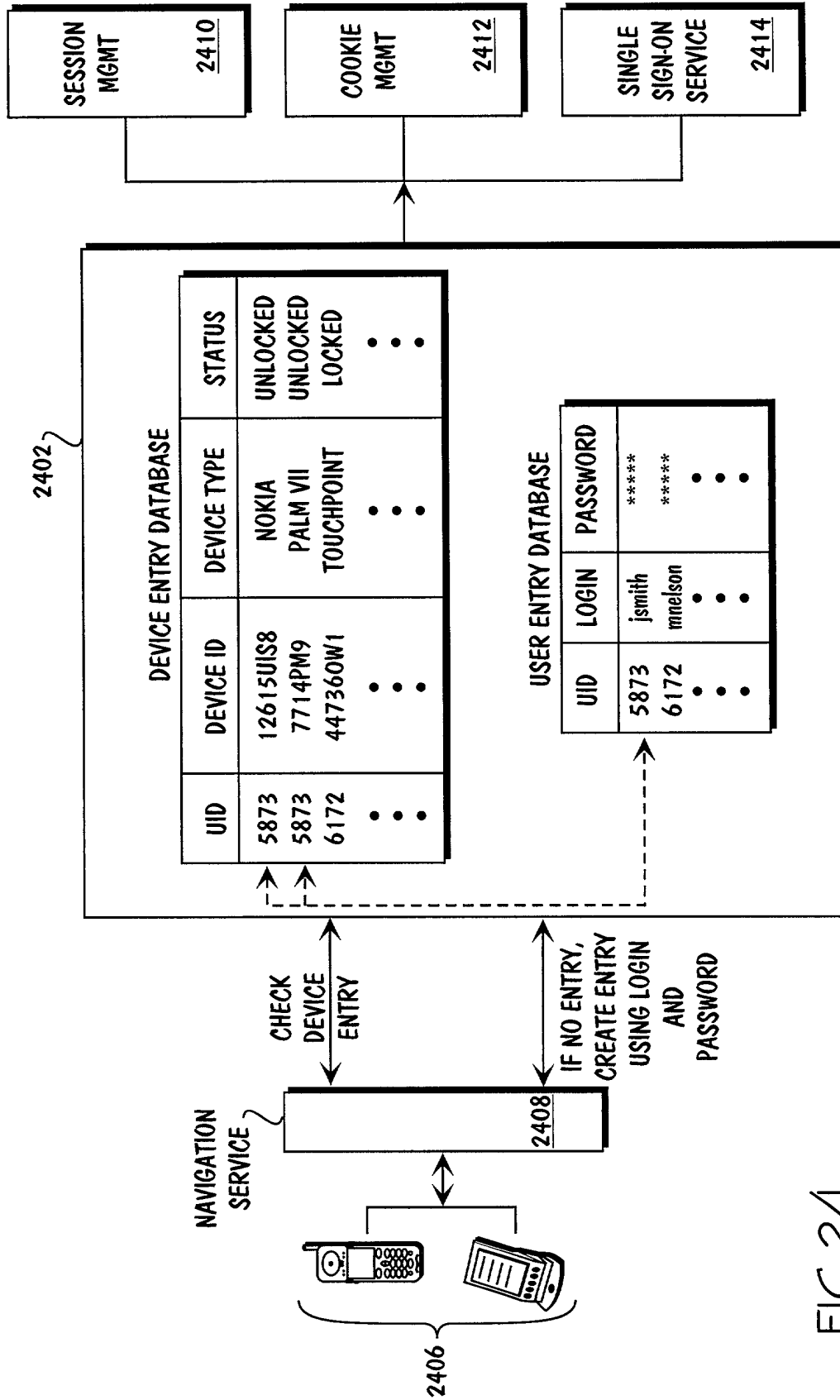


FIG. 24

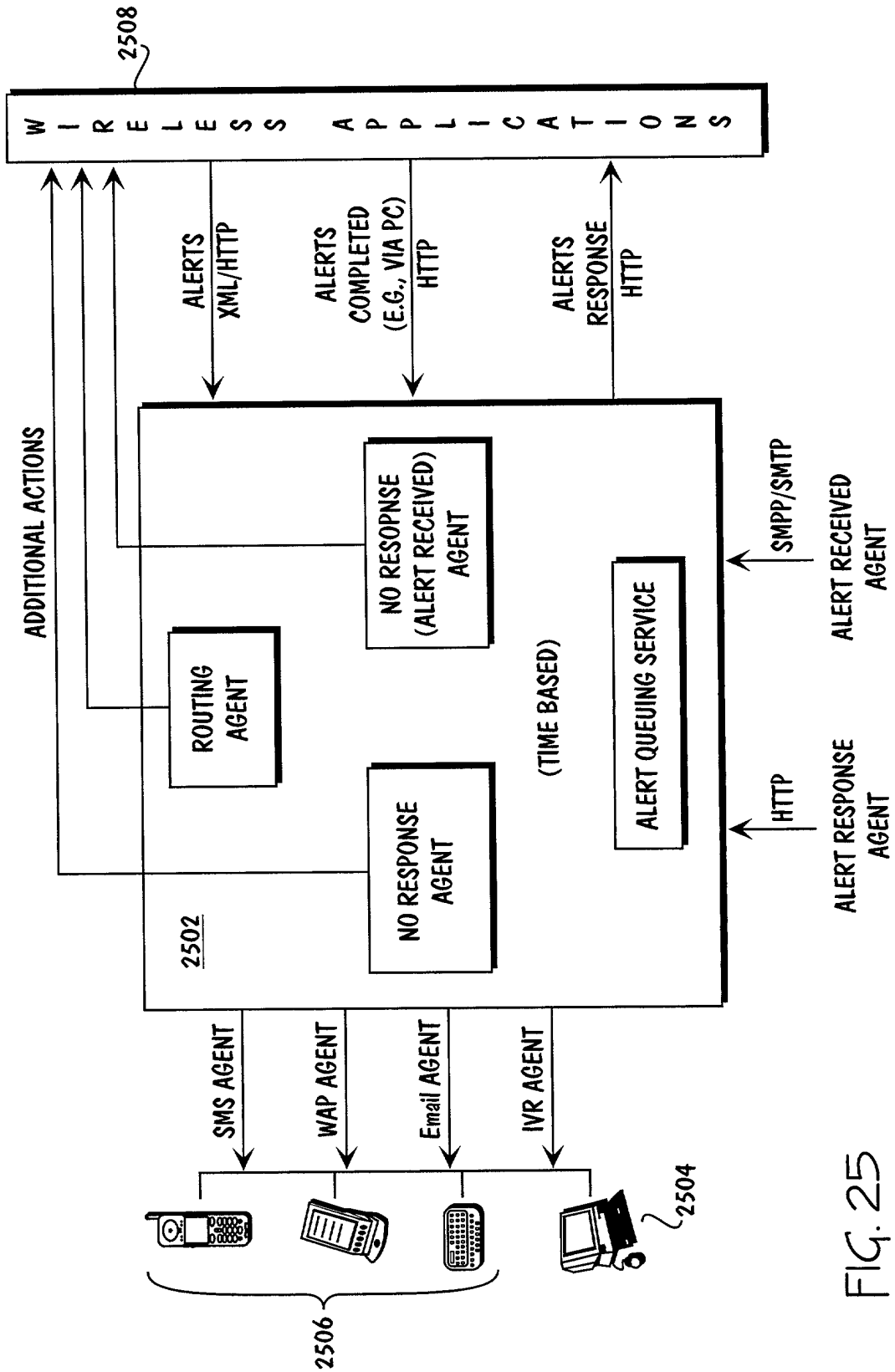
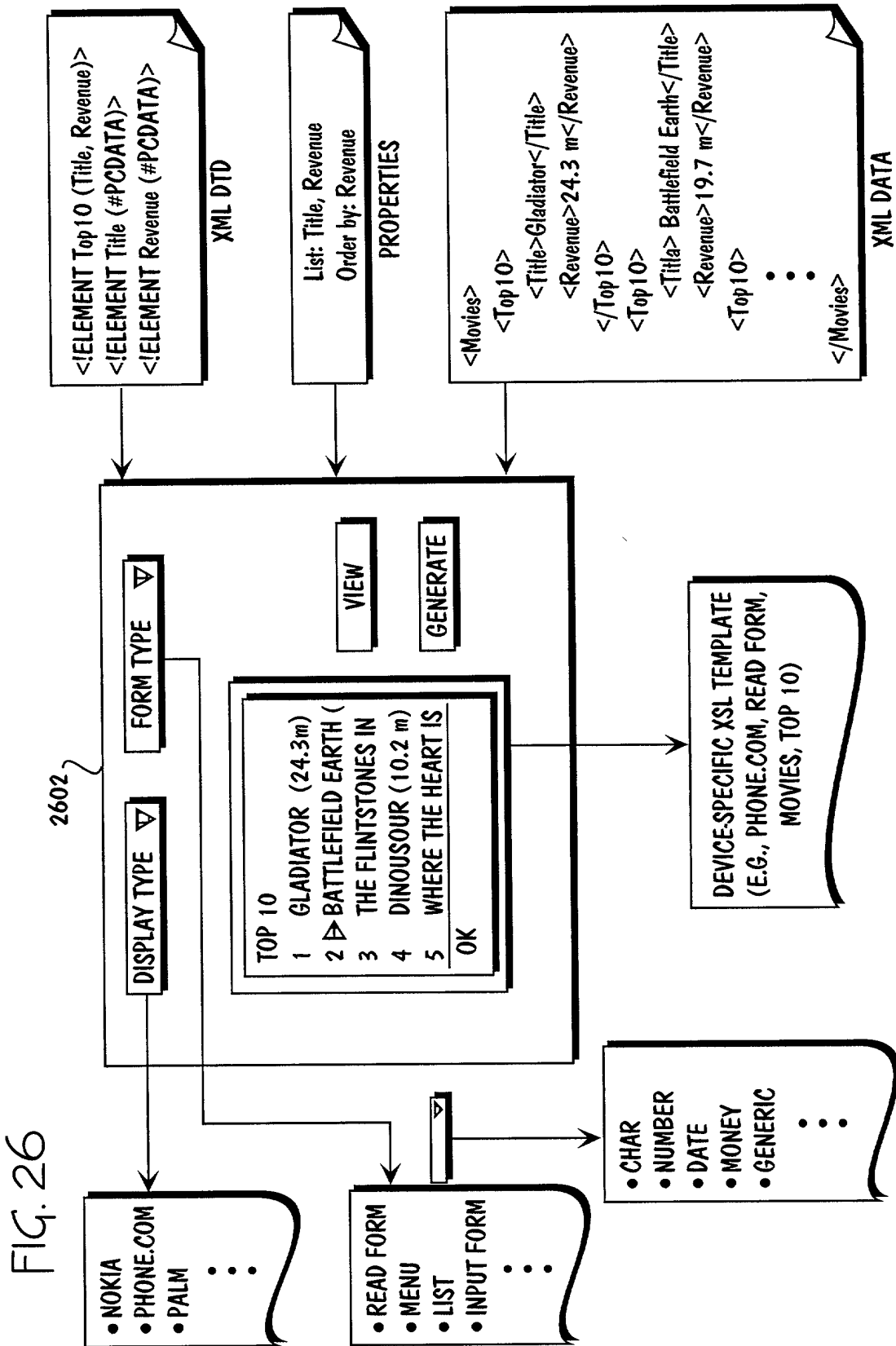


FIG. 25



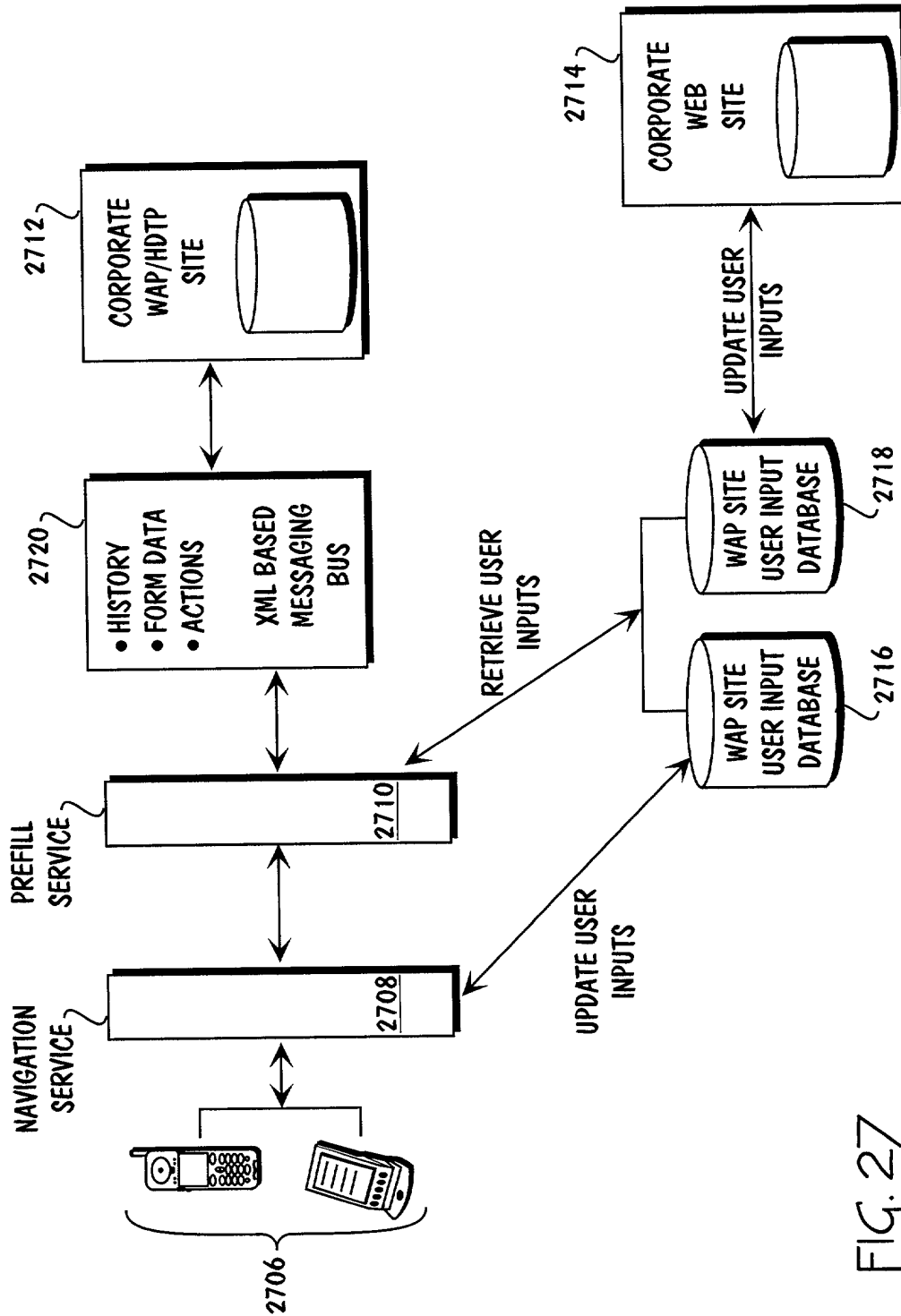


FIG. 27

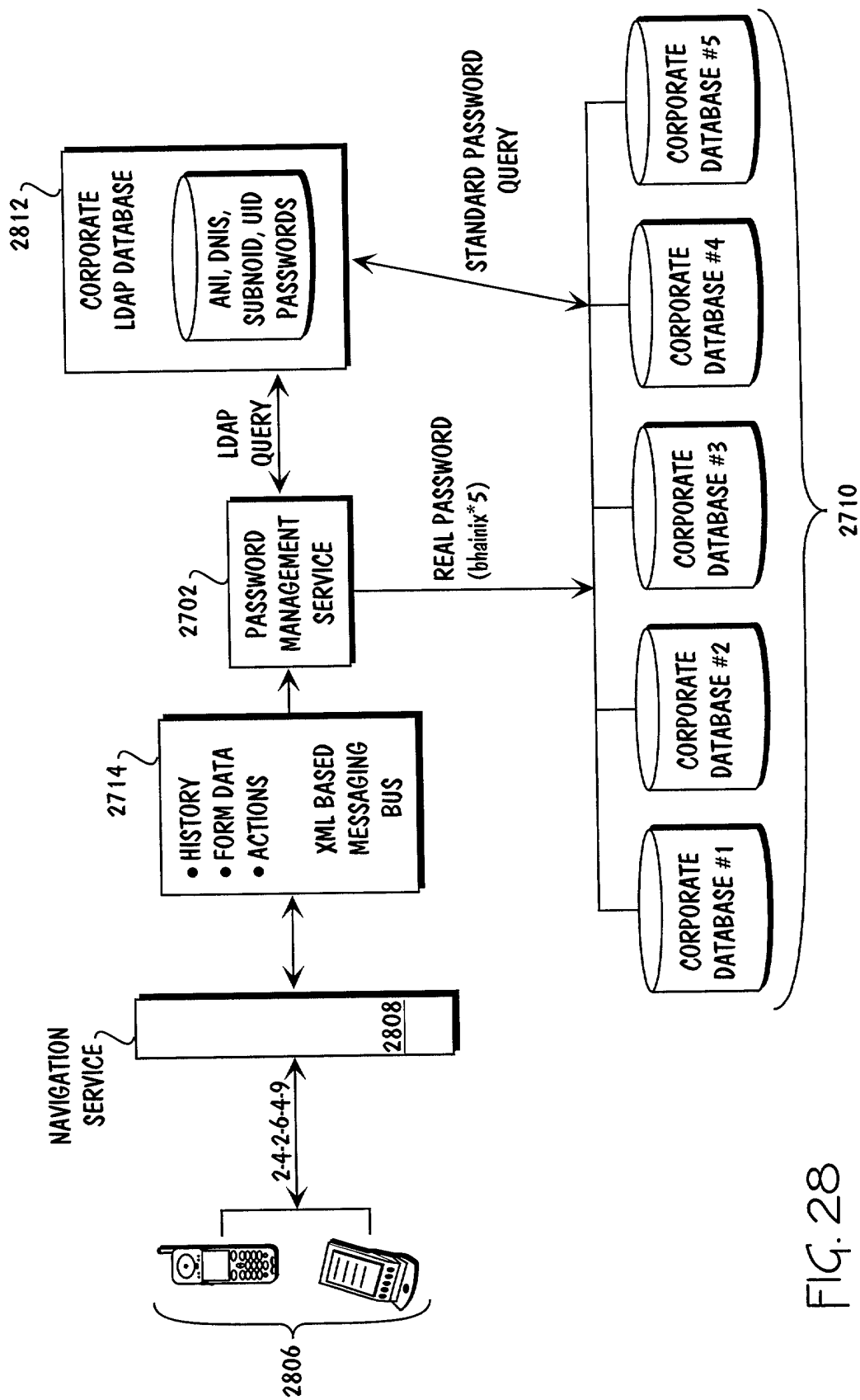
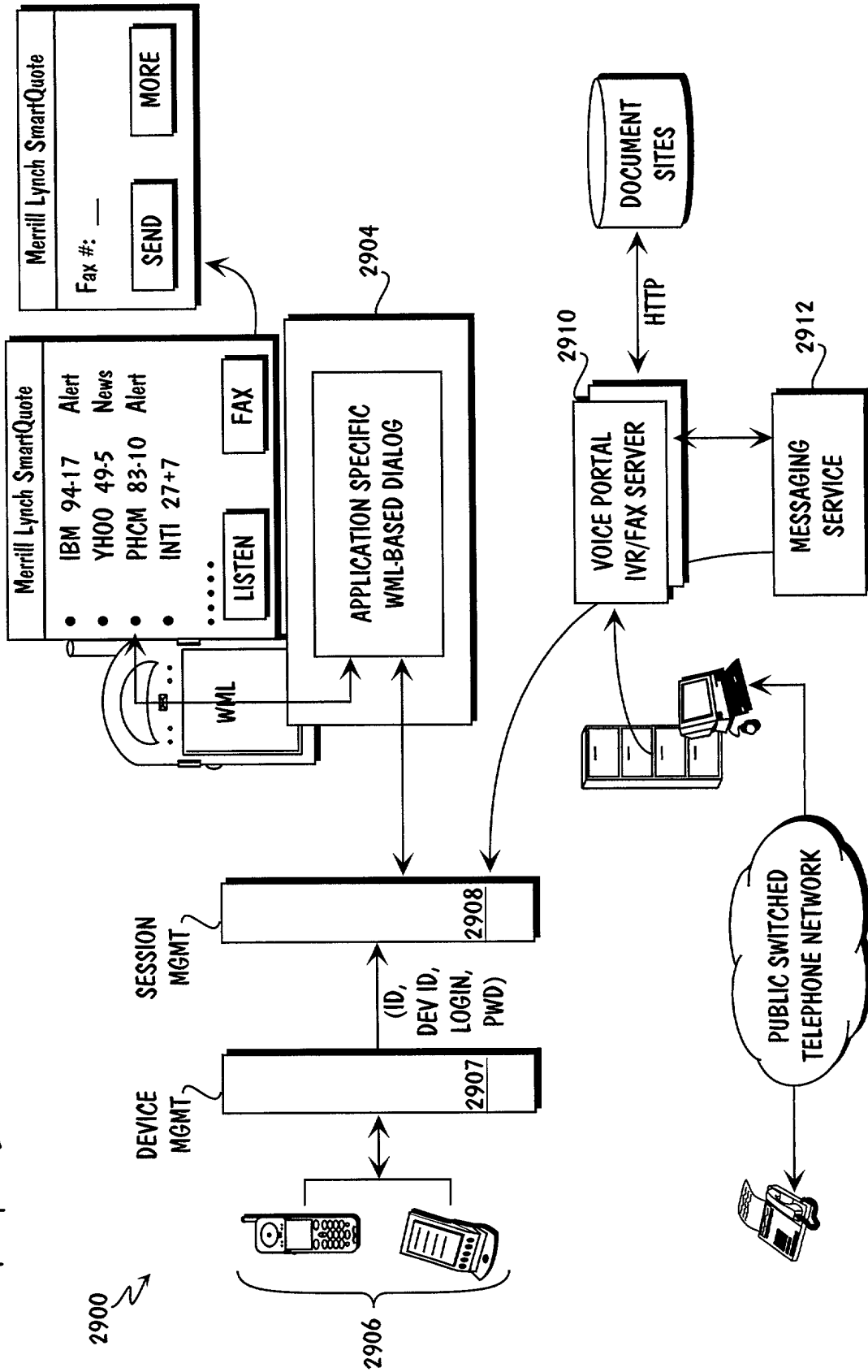


FIG. 28

FIG. 29A



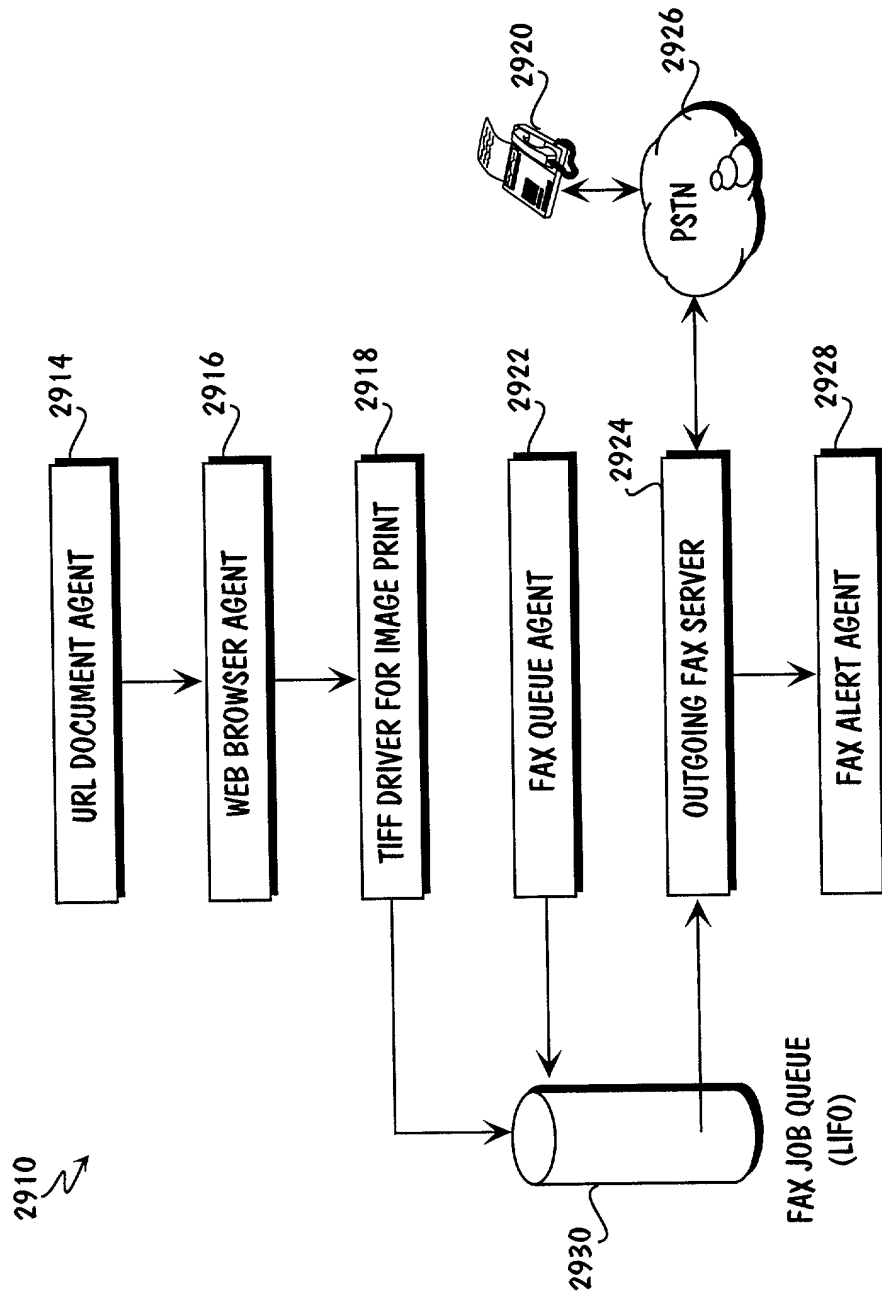


FIG. 29B

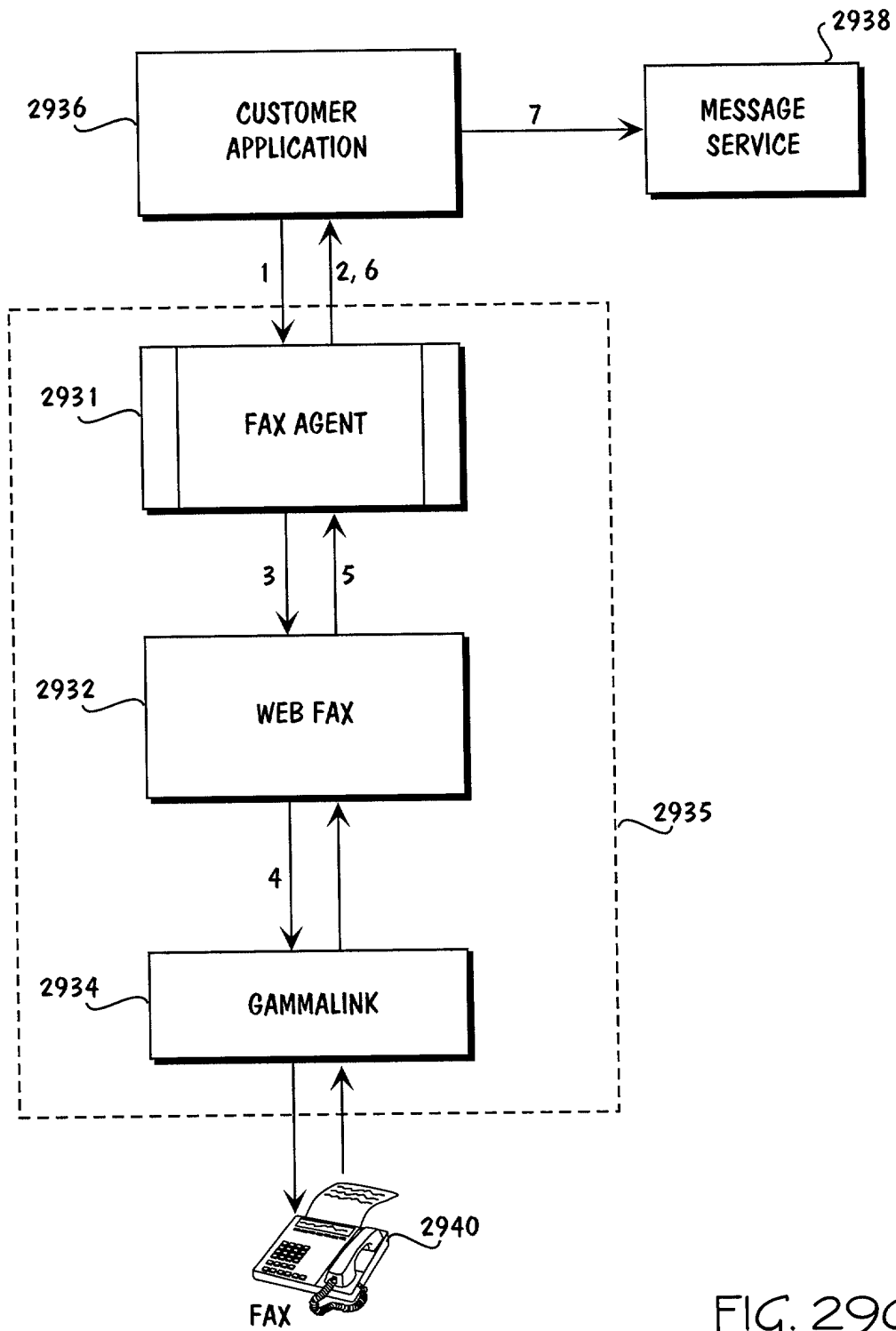


FIG. 29C



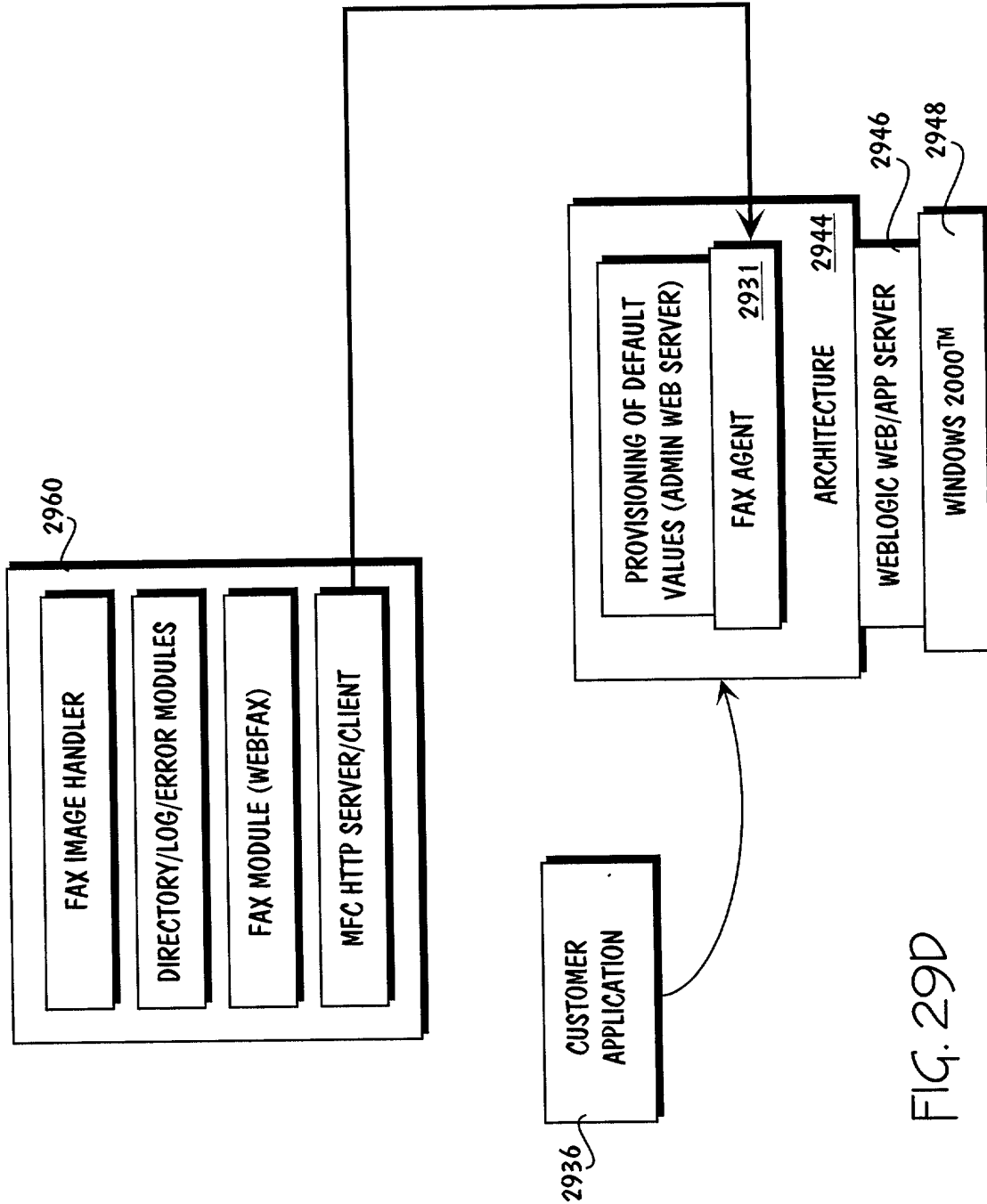


FIG. 29D

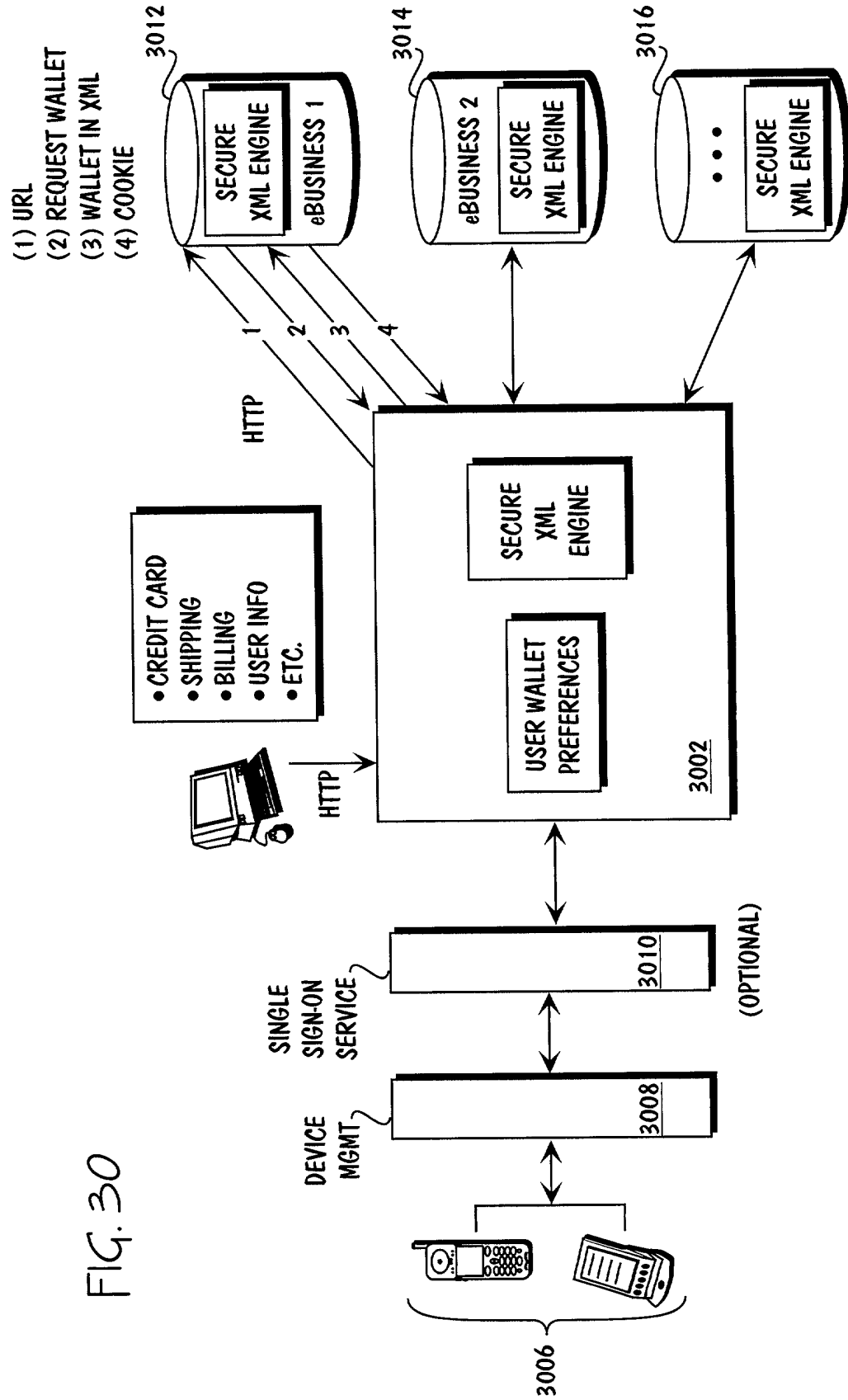
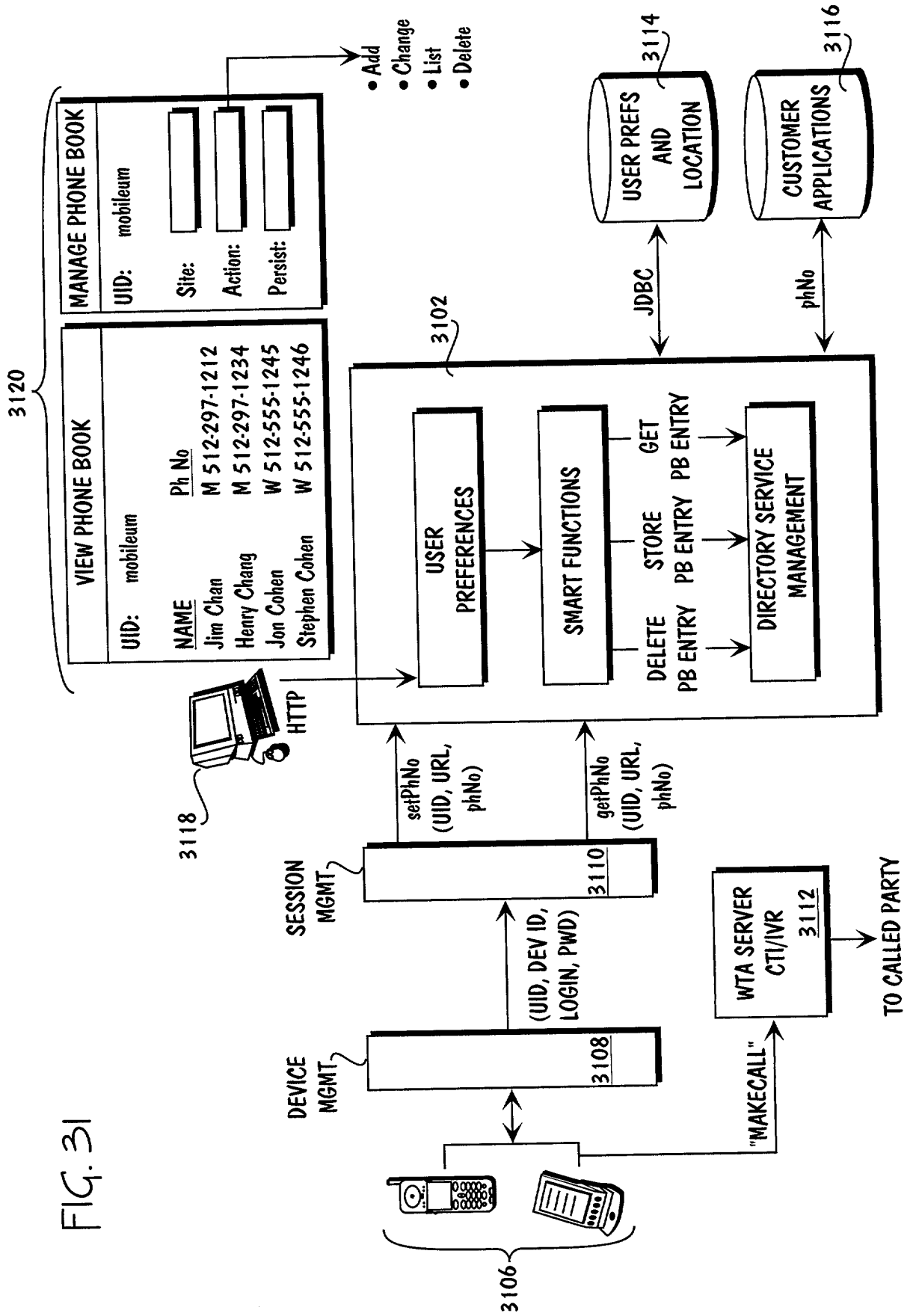


FIG. 31



**SKI REPORTS:**

1. ☒ ANGEL FIRE
2. ☒ ALTA

BASE: 36"  
NEW: 12"  
PACKED ICE

OK MAIN

FIG. 32A

**CHOOSE TOPPINGS:**

1. ☐ PEPPERONI
2. ☒ SAUSAGE
3. ☐ MEATBALLS
4. ☒ CHICKEN
5. ☐ PEPPERS

PICK ORDER

FIG. 32B

**RADIO BUTTONS:**

1. ☒ BUY ☐ SELL
2. ☒ DAY ☒ GTC

CHANGE SUBMIT

FIG. 32C

**CHOOSE TYPE OF PIZZA:**

1. ☐ DEEP DISH
2. ☒ THIN
3. ☐ HAND-TOSSED

**CHOOSE SAUCE:**

1. ☒ RED

PICK ORDER

FIG. 32D